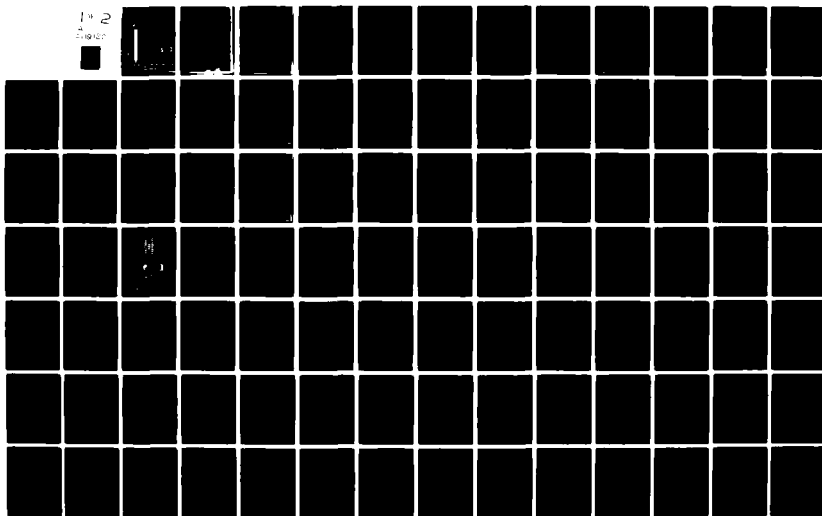


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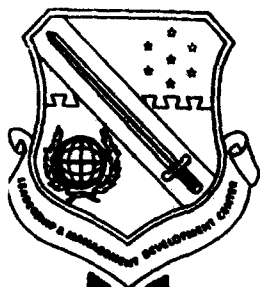
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FACTOR STABILITY
OF THE
ORGANIZATIONAL ASSESSMENT PACKAGE

CAPT JANICE M. HIGHTOWER, USAF

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AUGUST 1982

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ABSTRACT

The Organizational Assessment Package (OAP) is currently undergoing a complete factor-by-factor revision. A part of this effort is reexamining the validity of the survey instrument in the light of data and experience gained from two years of field use. Specifically, this study concerned the consistency of OAP factorial validity across both functional area and demographic groupings. Three measures of factor consistency were used: congruence coefficient, s-index, and root mean square. Results showed excellent and consistent factor solutions across groups and methods of measurement. Discussion is offered regarding results and implications for future use of the OAP.



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TABLE OF CONTENTS

	Page
Background	1
Purpose of the Study	2
Method	4
Instrumentation.	4
Sample and Procedure	6
Results.	10
Factor Structure	10
Factor Comparison.	14
Discussion and Conclusions	16
References	19
Appendix A: Current OAP Factor Numbers and Names.	21
Appendix B: The Organizational Assessment Package (OAP)	23
Appendix C: OAP Factors and Variables	36
Appendix D: Revised OAP Factor Structure and Corresponding Items Across All Functional Area and Demographic Groups	55
Appendix E: Results of Factor Comparison Studies.	82

LIST OF TABLES

Table		Page
1	Sample Sizes for Comparison Groups	7
2	Factor Analysis Results for Comparison Groups	11
3	Factors in Factor Analysis Solution Pre-Intervention Data Base	12
4	Order of Factors in Factor Analysis Solution	15
5	S-Index Significance Testing	17

Background

The validity of a survey instrument is often defined as the extent to which the instrument measures what it intends to measure (Carmines & Zeller, 1979). Since validity is also often considered the most essential feature of an instrument, its adequate and accurate determination generally receives a high priority in instrument development, evaluation, and, if necessary, redesign.

Despite its importance, however, validity is often complex to deal with in that it is a multi-faceted concept (Stanley & Hopkins, 1972), which requires continual monitoring and updating throughout the life of an instrument (Nunnally & Durham, 1975). The type of validity studied must also be matched to the purposes and goals of the validity study. This point is well made by Cronbach and Meehl (1955) who differentiate among types of validity by showing that each type involves some slightly different emphasis on the criterion measure. One particular type of validity, construct validity, is most appropriate for use when no definite, concrete, specific, or fully valid criterion measure is available. This type of validity seemed most appropriate in relation to the Organizational Assessment Package (OAP), the survey instrument which is the subject of study.

Considering Cronbach and Meehl's (1955) subtypes of construct validity, some evidence relating to OAP construct validity is already available. Short and Hamilton (1981) presented evidence essentially supporting the internal structure and change-over-occasions aspects of construct validity. Prior to

this study, OAP factors were expected to be internally consistent as assessed by Cronbach's alpha procedure and were expected to retain significant test-retest correlations across both five-week and six-month time intervals. It was further expected that the six-month correlations would be lower than those for the five-week intervals because of both the longer interval and the necessity that factors be sensitive to actual organizational changes rather than being artificially rigid. These expectations were confirmed with the exception of some of the two or three item factors that seemed to lack either internal consistency or stability. Short and Wilkerson (1981) offered support for the group differences aspects of OAP construct validity across major functional area groupings. This study was important to determine if OAP results would reflect known, meaningful and predictable differences among functional area groups and to determine if OAP factors reflected a higher degree of between-group variance than within-group variance when comparing functional area groups. Differences observed in this study seemed consistent, strong and predictable and also held across logical groupings of factors. Results were more equivocal, however, in testing hypotheses concerning specific pairs comparisons within factors.

Purpose of the Study

The purpose of the current study was, therefore, twofold. The first purpose was to examine factor stability across selected functional area and demographic groups. The second purpose of the study is related to the future of the OAP. The instrument is currently undergoing a complete factor-by-factor revision after two years of field use. The current report will provide important information helpful for decisions about which factors and items to retain, revise, or delete during the revision of the survey instrument.

Factor stability is a topic of general interest to both civilian (see, for example, Athanasou, O'Gorman, & Meyer, 1981; Piersel & Reynolds, 1981) and military (Kirk, Turney, & Cohen, 1978) survey researchers. It is also a topic of specific interest in regard to the OAP. The OAP must be used as both a diagnostic and an evaluation tool. As such, the stability of the instrument over the approximately six-week period between data collection and feedback and the approximately six-month interval between data gathering and evaluation administrations of the OAP is critical. Few issues are more important, then, than the stability of the factor structure across both the time intervals as well as across functional area groups. Failure to demonstrate these kinds of factorial validity would cause considerable doubt as to the value of the OAP as either a diagnostic or an evaluation tool. Whether observed group differences following consulting were due to changes in the group or to measurement error and instrument instability could be considered an open question. Demonstrating factor stability would, therefore, go a long way toward controlling for instrumentation (Campbell & Stanley, 1963) as a rival hypothesis for group change due to a consulting effect.

Additionally, the study was important as an extension to studies of internal consistency and stability by test-retest measures. Within LMDC's consulting methodology, separate random samples of an organization are selected from survey time one (pre-intervention) to survey time two (post-intervention). Since traditional stability studies make use of the same subjects from time one to time two, many test-retest indices may be little more than an index of subject memory. This study allows a check on stability

results by using a different sample from pre to post. Results showing stable factor structures would, therefore, strongly suggest that observed consistency is actually present in the instrument and could not be attributed to memory or other subject response sets or biases.

Finally, demonstrating factorial stability seems to be an important consideration in determining type of change following a consultation visit. Factor instability would almost certainly cause any change following a consulting intervention to be considered as beta change (see for example, Terborg, Howard, & Maxwell, 1980; Golembiewski, Billingsley, & Yeager, 1976). If factor structures can be considered stable across time, and functional area and demographic groups, consideration of pre-post self-report changes would have much more credibility as measuring either alpha or gamma change.

Method

Instrumentation

The OAP is a 109-item survey questionnaire designed jointly by the Air Force Human Resources Laboratory and the Leadership and Management Development Center to aid LMDC in its mission to: (a) provide management consultation services to Air Force commanders on request, (b) to provide leadership and management training, and (c) to conduct research on Air Force systemic issues with information within the accumulated data base. Supporting developmental research for the OAP is provided in Hendrix and Halverson (1979a; 1979b) and Hendrix (1979).

Administration of the OAP is the first step in the consultation process. The survey is given to a stratified random sample of the organization to which LMDC has been invited. The results of the survey are an important feature in the assessment of the organization. The results are handled in a confidential manner between LMDC and the client. After approximately five to six weeks for analysis, feedback of data is provided to commanders and supervisors within the organization.

When specific problems are encountered, a consultant and supervisor develop a management action plan designed to resolve the problem at that level of the organization. Within six to nine months, the consulting team returns to readminister the survey instrument as a means to help assess the impact of the consulting process.

The data from each OAP administration effort are stored in a cumulative data base currently containing over 100,000 records. These data are aggregated by work group codes developed for this instrument. The data may be recalled by demographics such as personnel category, age, sex, Air Force Specialty Code (AFSC), pay grade, time in service, and educational level. The ninety-three attitudinal items are combined into factors which cover job content, job interferences, and various types of supervisory and organizational areas. More detailed information about the OAP is found in the appendices. Current OAP factor numbers and names are presented in Appendix A. A copy of the OAP instrument is contained in Appendix B, and the OAP Output Package containing current OAP factors and the items that compose them is contained in Appendix C.

Sample and Procedure

In order to study factor stability, responses to the pre-intervention OAP were drawn from the data base and aggregated by major functional area and demographic groupings to form independent groups. Functional area groupings were wing/group staff, resources, maintenance, operations, medical, missiles, communications, and unique, a category containing people in organizations with scientific and technical orientation. The demographic groupings included sex, personnel category (officer, enlisted, civilian), and ethnic group (white, black, hispanic, and other). In addition, factor structure from survey time one (pre-intervention) results was compared to survey time two (post-intervention) results. The number of people in each group may vary by factor because of individual response patterns to the instrument, and figures presented represent the total number of cases in the data base by functional area or demographic grouping for which responses were available on all 93 attitudinal items. The sample sizes for all comparison groups are contained in Table 1. Principal component analyses were accomplished with a principle factor solution using a varimax rotation from the procedures contained in the Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner & Bent, 1975; Hull & Nie, 1981). The factor solution cutoff criterion was an eigenvalue of 1.00. With the exception of the male-female and survey time one-survey time two comparisons which were done directly, all of the comparisons were accomplished by comparing the factor solution for a specific group to the factor solution for the OAP pre-intervention data base exclusive of that group.

Table 1
Sample Sizes for Comparison Groups

<u>Group</u>	<u>N</u>
Wing/Group	12758
Resources	4827
Maintenance	8295
Operations	2117
Medical	2426
Missiles	961
Communications	988
Unique	8261
Officer	5345
Enlisted	30508
Civilian	8257
White	34333
Black	4863
Hispanic	2128
Other	3138
Male	37633
Female	6856
Survey Time 1	44728
Survey Time 2	18370

We are aware of the technical differences between principal components analysis and factor analysis, per se, especially the use of 1s rather than commonalities in the principal diagonals of the correlation matrix. Components analysis was chosen, however, for several reasons as discussed by Mulaik (1972, p. 174). First, results using components analysis often do not differ greatly from those expected using common factor analysis. Second, factor scores can be directly computed rather than estimated. Finally, component analysis seems more appropriate when the major intent is to summarize a set of variables into a smaller number of hopefully orthogonal variables, as is the case here. Therefore, principal components was the method of choice. We have, however, used the term "factor" to refer to resulting components to avoid confusion for the casual reader even though we recognize the resulting indices were not, strictly speaking, derived by "factor analysis."

It should also be noted at this point that we are dealing with what Levine (1977) calls factor matrix comparison procedures, not target analysis procedures. In this case, all factor structures compared are empirically derived, none being a theoretically hypothesized structure. As such, the factor matrix comparison procedures were the method of choice. If the selection of factor matrix comparison procedures over target matrix procedures seemed clear, however, the method of choice for doing the factor comparisons was less clear. Three methods appeared to be the most likely candidates: the root mean square (RMS), the congruence coefficient (CC), the salient variable similarity index (S). Since each of these methods had some drawbacks, however, we elected to follow the suggestions of Cattell, Balear, Horn & Nesselroade (1969) and use more than one method to make the comparisons.

While a detailed analysis of the three comparison methods is beyond the scope of the current study, an excellent discussion of the positive and negative aspects of each is contained in Levine (1977). Although the congruence coefficient (Harman, 1967) is the best known procedure and the RMS is the most basic factor comparison procedure, Levine notes some disadvantages of both: RMS and CC are sensitive to both pattern differences and magnitude of factor loadings when attention should be directed only to differences in patterns; and tests of significance of matches are precluded due to problems of defining the sampling distribution of both procedures. Since the S-index does have at least an approximate test of significance and is sensitive to pattern similarities/differences rather than magnitude of factor loadings, comparison of the results of all three procedures was thought to provide a more precise estimate of the extent of factor matches than could be obtained from any single procedure.

The factor loading comparisons, using the three comparison techniques, were accomplished using computer programs written for this project. The programs used as input data the factor loading matrices output by the SPSS factor analysis procedure. For each program run, the data set consisted of the factor loadings for a group and the loadings for the pre-intervention data base exclusive of that group. The program output is a matrix of congruence coefficients, S-indices, or RMS values, depending on the specific program, calculated for all possible factor pairs between the two solutions.

Results

Factor Structure

Results of the revised factor structure may be seen in the tables in Appendix D. These tables contain the factor loadings for the 13 interpretable factors across all functional area and demographic groups. Variables were assigned to factors based on two criteria. First, loadings needed to be .30 or higher for inclusion. Since these data were being used for purposes of instrument revision, however, another criterion was necessary so that all existing OAP variables could be assigned against a factor. The second criterion, then, was that each variable was assigned to the factor on which it loaded most highly. This criterion was used to identify low loading or complex items which became strong candidates for exclusion from the instrument if not justifiable on content grounds. As may be seen from Table D, no items loaded lower than .30, and the occurrence of complex items was very rare. The result was a set of fairly "clean" factor solutions.

Most groups showed a solution with 13 interpretable factors and one uninterpretable factor. In this case, an uninterpretable factor consisted of an item or pattern of items that could not be meaningfully labeled. In four cases, two uninterpretable factors appeared, and in two cases, three uninterpretable factors appeared. These results are summarized in Table 2 in the text along with the percentage of the variance accounted for by the factor solution for each group. Table 3 is a list of the factors common to the analyses for all the groups, the order of the factors for the pre intervention data base, and the amount of variance accounted for by each of the factors.

Table 2
Factor Analysis Results for Comparison Groups

<u>Group</u>	<u># Factors in Solution*</u>	<u>% Variance Accounted For</u>
Wing/Group	14	64.8
Resources	14	64.1
Maintenance	15	62.2
Operations	15	63.2
Medical	14	62.5
Missiles	16	65.2
Communications	16	65.4
Unique	14	63.9
Officers	15	64.0
Enlisted	14	62.5
Civilians	14	64.1
White	14	63.4
Black	14	62.2
Hispanic	14	64.2
Other	14	64.3
Male	14	63.3
Female	15	64.3
Survey Time 1	14	63.3
Survey Time 2	14	66.0

*The number of factors represents total number extracted for each group both interpretable and uninterpretable.

Table 3
Factors in Factor Analysis Solution
Pre-Intervention Data Base

<u>Factor Number</u>	<u>Factor Name*</u>	<u>Eigenvalue</u>	<u>Percent of Variance</u>	<u>Cumulative Percent</u>
1	Supervision	27.97	30.1	30.1
2	Organizational Climate	6.46	6.9	37.0
3	Work Group Effectiveness	4.59	4.9	41.9
4	Task Characteristics	2.93	3.1	45.1
5	Job Role Pride and Satisfaction	2.65	2.9	48.0
6	Need for Enrichment	2.55	2.7	50.7
7	Task Autonomy	2.24	2.4	53.1
8	Job Performance Goals	1.76	1.9	55.0
9	Advancement/Recognition	1.65	1.8	56.8
10	Work Support	1.42	1.5	58.3
11	Work Interferences	1.34	1.4	59.7
12	Work Repetition	1.14	1.2	61.0
13	Desired Repetitive Easy Tasks	1.10	1.2	62.1

*Based on item content

Numbers of items on each factor may be seen in the Tables in Appendix D.

Regarding the tables in Appendix D, factor loadings in parentheses are those that are not the highest for a given variable and group. For example, consider Table 1, Appendix D. Variables 404 through 445 loaded higher on the Supervision factor than on any other factor across all groups. Variables 215 and 711, however, loaded highest on the Supervision factor for some groups but not others. If a variable loaded highest on the Supervision factor for at least one group, its loadings were reported for all groups. Where a variable loads higher on another factor, the loading is put in parentheses. Therefore, variable 711 in Table 1, Appendix D, loads highest on the Supervision factor only for the medical group. For the other groups, this variable loads higher on other factors, as indicated by the loadings being expressed in parentheses.

Comparing the current OAP factor structure in Appendix A with the revised structure in Appendix D, some differences can be observed. Two current factors 811 (Pride) and 822 (Job Satisfaction) converged in the revised structure. In addition, current factors 820 (Organizational Communications Climate) and 824 (General Organizational Climate) did not separate in the revised structure as they do in the current structure. The same was true of the Supervision factors, 818 (Management/Supervision) and 819 (Supervisory Communications Climate). All other factors seemed consistent between current and revised structures with the exception of some slight item deletion and shift among the factors which may be seen by comparing Appendix C with Appendix D.

Factor Comparison

Results of factor comparison are given in the tables in Appendix E. Comparisons based on congruence coefficients, S-indices, and root mean squares are provided for each functional area and demographic group. By way of explanation, the rows and columns in each table may be identified in terms of content by reference to Table 4, which shows the order of factors identified by amount of variance accounted for. Inspection of the tables in Appendix E shows consistently high results for matching factors as evidenced by the main diagonals of the tables. Even in those cases where larger coefficients are off the main diagonal, factors still match by content if not by order in the solution. The order of the factors in the solution was considered to have little practical significance, since this often reflects a very small difference in amount of variance accounted for. As such, results for the revised factor solution are consistent by content, if not always by number, regardless of the analytic procedures used.

In interpreting the values in the tables, it should be noted that the possible range of RMS values is from zero (a perfect match) to a maximum value of two (all loadings equal to unity but having opposite signs). For S-indices and congruence coefficients, a value of ± 1 indicates a perfect match and a value of zero indicates no congruence between factors. Congruence coefficients ranged from .90 to .99 with most being .99 for matching factors. S-indices ranged from .66 to .98 with most values falling between .80 and .89 (all significant $p < .05$). RMS values fell between .01 and .06 with most values being either .01 or .02. Further, when variables were

Table 4
Order of Factors in Factor Analysis Solution
(Factors as identified by item content)

Group	Super- vision	Organi- zational Climate	Work Group Effec- tiveness	Task Charac- teris- tics	Job Role Pride & Satisfac- tion	Need for Enrich- ment	Task Auton- omy	Job Per- formance Goals	Advance- ment/Re- cognition	Work Sup- port	Work Inter- fer- ences	Work Repe- tition	Desired Repetitive Easy Tasks
Wing/Group	1	2	3	4	6	7	5	8	9	10	11	12	13
Data Base Except Wing/Group	1	2	3	4	5	6	7	8	9	10	11	12	13
Resources	1	2	3	6	5	4	7	8	9	10	11	12	13
Data Base Except Resources	1	2	3	4	5	6	7	8	9	10	11	12	13
Maintenance	1	2	3	4	5	6	7	8	9	10	12	11	13
Data Base Except Maintenance	1	2	3	4	6	5	7	8	9	10	11	12	13
Operations	1	2	4	9	3	5	7	6	8	10	12	14	13
Data Base Except Operations	1	2	3	4	5	6	7	8	9	10	11	12	13
Medical	1	2	3	5	4	6	7	8	9	10	11	12	13
Data Base Except Medical	1	2	3	4	5	6	7	8	9	10	11	12	13
Missiles	1	2	3	4	5	6	7	8	9	10	12	11	13
Data Base Except Missiles	1	2	3	4	5	6	7	8	9	10	11	12	13
Communications	1	2	3	8	5	6	7	4	9	11	12	13	14
Data Base Except													
Communications	1	2	3	4	5	6	7	8	9	10	11	12	13
Unique	1	2	4	3	7	5	6	8	9	10	11	12	13
Data Base Except Unique	1	2	3	4	5	6	7	8	9	10	11	12	13
Male	1	2	3	4	6	5	7	8	9	10	11	12	13
Female	1	2	3	5	4	6	7	8	9	10	11	12	13
White	1	2	3	4	5	6	7	8	9	10	11	12	13
Data Base Except White	1	2	4	3	5	6	7	8	9	10	11	12	13
Black	1	2	4	3	5	6	7	8	9	10	11	12	13
Data Base Except Black	1	2	3	4	5	6	7	8	9	10	11	12	13
Hispanic	1	2	4	3	5	6	7	8	9	10	11	12	13
Data Base Except Hispanic	1	2	3	4	5	6	7	8	9	10	11	12	13
Others (Race)	1	2	3	4	5	6	7	8	9	10	11	12	13
Data Base Except Others	1	2	4	3	6	5	7	8	9	10	11	12	13
Officers	1	2	4	3	8	6	5	7	9	10	11	12	13
Data Base Except Officers	1	2	3	4	5	6	7	8	9	10	11	12	13
Enlisted	1	2	3	4	5	6	7	8	9	10	11	12	13
Data Base Except Enlisted	1	2	3	4	9	5	6	7	8	10	11	12	13
Civilians	1	2	3	4	7	5	6	9	8	10	11	12	13
Data Base Except Civilians	1	2	3	4	5	6	7	8	9	10	11	12	13
Survey Time 1	1	2	3	4	5	6	7	8	9	10	11	12	13
Survey Time 2	1	2	4	3	7	5	6	8	9	10	11	12	13

included only in the factor on which they loaded most highly, examination of factors across the groups studied revealed that the factors consistently contained the same variables, especially when only the variables which loaded strongly on a factor ($> .40$) were considered. The order of the factors also showed a great deal of consistency across groups, as can be seen from Table 4.

As previously noted, one of the advantages of the S-index is the availability of significance testing for the derived indices. Using the results of the simulation study by Cattell et al (1969), the statistical significance of S-indices were evaluated. As an example, the results for one of the functional areas (medical) are shown in Table 5. The S-indices were calculated on a factor-by-factor bases with the hyperplane limits adjusted so that hyperplane counts would fall in the range of the tables. It is clear that all S-index values for corresponding factors are well above the critical value of .38 ($p < .0005$).

Discussion and Conclusions

Comparing the results in Table 3 with the current OAP factor structure as seen in Appendix B, some differences may be seen. These differences are not surprising. Much more extensive and representative data are available now that were not available in 1979 during development. The different factor structure should be viewed as a sharpening of the factors, making them more efficient and effective. Future research in this area should focus on measurement of factor stability over a period of two or three years to be certain the passage of time does not alter factor solutions.

Table 5
S-Index Significance Testing

<u>Factors For:</u>					
<u>Medical</u>	<u>Data Base Except Medical</u>	<u>Hyperplane Limits</u>	<u>% of Values In Hyperplane</u>	<u>s</u>	<u>v: p(s>v) < 0.0005</u>
1	1	<u>+0.25</u>	67.7	0.933	0.38
2	2	<u>+0.25</u>	65.6	0.9375	0.38
3	3	<u>+0.12</u>	68.8	0.69	0.38
4	5	<u>+0.12</u>	63.44	0.853	0.38
5	4	<u>+0.1</u>	60.2	0.84	0.38
6	6	<u>+0.1</u>	79.0	0.67	0.38
7	7	<u>+0.1</u>	61.8	0.73	0.38
8	8	<u>+0.1</u>	66.7	0.81	0.38
9	9	<u>+0.1</u>	60.8	0.85	0.38
10	10	<u>+0.1</u>	81.7	0.71	0.38
11	11	<u>+0.1</u>	85.5	0.74	0.38
12	12	<u>+0.1</u>	79.6	0.84	0.38
13	13	<u>+0.05</u>	66.1	0.54	0.38

Concerning the purposes of the study, results supported the stability of the revised OAP factor structure, reducing the risk of instrumentation problems. In addition, obtaining consistent factor structures even when using separate samples in comparing Survey Time 1 with Survey Time 2 lend important support to the notion that observed item and factor reliability is not due principally to memory or response set bias. Finally, demonstration of a stable factor structure helps lessen the possibility that observed changes following a consulting visit are beta changes. With this possibility lessened, the alternate possibility of alpha or gamma change is more likely.

In general, then, results provided strong and systematic support for the consistency of the OAP revised factor structure across both functional area and demographic groups. Further, this consistency was observed regardless of the method of computing factor matching values. The high values shown when comparing Survey Time 1 with Survey Time 2 results were especially encouraging, since they indicate a high degree of instrument stability across a six month consulting intervention. This finding is especially important when combined with group difference studies. Taken together, these results show an excellent combination of stability, consistency, and sensitivity to change that supports the use of the OAP as both a data gathering and evaluation instrument and point the way for revising and refining the OAP factor structure.

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APPENDIX A

CURRENT OAP FACTOR NUMBERS
AND NAMES

<u>Factor Number</u>	<u>Factor Name</u>
800	Skill Variety
801	Task Identity
802	Task Significance
804	Job Feedback
805	Work Support
806	Need for Enrichment (Job Desires)
810	Job Performance Goals
811	Pride
812	Task Characteristics
813	Task Autonomy
814	Work Repetition
816	Desired Repetitive Easy Tasks
817	Advancement/Recognition
818	Management-Supervision
819	Supervisory Communications Climate
820	Organizational Communications Climate
821	Perceived Productivity (Work Group Effectiveness)
822	Job Satisfaction
823	Job Related Training
824	General Organizational Climate

APPENDIX B

THE ORGANIZATIONAL ASSESSMENT PACKAGE

EXPIRATION DATE: 31 Oct 1981

SCN 81- 14

GENERAL INFORMATION

The leaders of your organization are genuinely interested in improving the overall conditions within their areas of responsibility. Providing a more satisfying Air Force way of life and increasing organizational effectiveness are also goals. One method of reaching these goals is by continual refinement of the management processes of the Air Force. Areas of concern include job related issues such as leadership and management; training and utilization; motivation of and concern for people; and the communication process.

This survey is intended to provide a means of identifying areas within your organization needing the greatest emphasis in the immediate future. You will be asked questions about your job, work group, supervisor, and organization. For the results to be useful, it is important that you respond to each statement thoughtfully, honestly, and as frankly as possible. Remember, this is not a test, there are no right or wrong responses.

Your completed response sheet will be processed by automated equipment, and be summarized in statistical form. Your individual response will remain confidential, as it will be combined with the responses of many other persons, and used for organizational feedback and possibly Air Force wide studies.

KEY WORDS

The following should be considered as key words throughout the survey:

- Supervisor: The person to whom you report directly.
- Work Group: All persons who report to the same supervisor that you do.
- Organization: Your squadron. However, if you work in staff/support agencies, the division or directorate would be your organization.

INSTRUCTIONS

1. All statements may be answered by filling in the appropriate spaces on the response sheet provided. If you do not find a response that fits your case exactly, use the one that is the closest to the way you feel.

2. Be sure that you have completed Section 1 of the response sheet, as instructed by the survey administrator, before beginning Section 2.

3. Please use the pencil provided, and observe the following:

--Make heavy black marks that fill the spaces.

--Erase cleanly any responses you wish to change.

--Make no stray markings of any kind on the response sheet.

--Do not staple, fold or tear the response sheet.

--Do not make any markings on the survey booklet.

4. The response sheet has a 0-7 scale. The survey statements normally require a 1-7 response. Use the zero (0) response only if the statement truly does not apply to your situation. Statements are responded to by marking the appropriate space on the response sheet as in the following example:

Using the scale below, evaluate the sample statement.

1 = Strongly disagree

2 = Moderately disagree

3 = Slightly disagree

4 = Neither agree nor disagree

5 = Slightly agree

6 = Moderately agree

7 = Strongly agree

Sample Statement. The information your work group receives from other work groups is helpful.

If you moderately agree with the sample statement, you would blacken the oval (6) on the response sheet.

Sample Response: NA
 (0) (1) (2) (3) (4) (5) (6) (7)

5. When you have completed the survey, please turn in the survey materials as instructed in the introduction.

BACKGROUND INFORMATION

This section of the survey concerns your background. The information requested is to insure that the groups you belong to are accurately represented and not to identify you as an individual. Please use the separate response sheet and darken the oval which corresponds to your response to each question.

1. Total years in the Air Force:

1. Less than 1 year.
2. More than 1 year, less than 2 years
3. More than 2 years, less than 3 years.
4. More than 3 years, less than 4 years.
5. More than 4 years, less than 8 years.
6. More than 8 years, less than 12 years.
7. More than 12 years.

2. Total months in present career field.

1. Less than 1 month.
2. More than 1 month, less than 6 months.
3. More than 6 months, less than 12 months.
4. More than 12 months, less than 18 months.
5. More than 18 months, less than 24 months.
6. More than 24 months, less than 36 months.
7. More than 36 months.

3. Total months at this station:

1. Less than 1 month.
2. More than 1 month, less than 6 months.
3. More than 6 months, less than 12 months.
4. More than 12 months, less than 18 months.
5. More than 18 months, less than 24 months.
6. More than 24 months, less than 36 months.
7. More than 36 months.

4. Total months in present position:

1. Less than 1 month.
2. More than 1 months, less than 6 months.
3. More than 6 months, less than 12 months.
4. More than 12 months, less than 18 months.
5. More than 18 months, less than 24 months.
6. More than 24 months, less than 36 months.
7. More than 36 months.

5. Your Ethnic Group is:

1. American Indian or Alaskan Native
2. Asian or Pacific Islander
3. Black, not of Hispanic Origin
4. Hispanic
5. White, not of Hispanic Origin
6. Other

6. Your highest education level attained is:

1. Non-high school graduate
2. High school graduate or GED
3. Less than two years college
4. Two years or more college
5. Bachelors Degree
6. Masters Degree
7. Doctoral Degree

7. Highest level of professional military education (residence or correspondence):

0. None or not applicable
1. NCO Orientation Course or USAF Supervisor Course (NCO Phase 1 or 2)
2. NCO Leadership School (NCO Phase 3)
3. NCO Academy (NCO Phase 4)
4. Senior NCO Academy (NCO Phase 5)
5. Squadron Officer School
6. Intermediate Service School (i.e., ACSC, AFSC)
7. Senior Service School (i.e., AWC, ICAF, NWC)

8. How many people do you directly supervise?

- | | |
|---------|--------------|
| 1. None | 4. 3 |
| 2. 1 | 5. 4 to 5 |
| 3. 2 | 6. 6 to 8 |
| | 7. 9 or more |

9. For how many people do you write performance reports?

- | | |
|---------|--------------|
| 1. None | 4. 3 |
| 2. 1 | 5. 4 to 5 |
| 3. 2 | 6. 6 to 8 |
| | 7. 9 or more |

10. Does your supervisor actually write your performance reports?

- | | | |
|--------|-------|-------------|
| 1. yes | 2. no | 3. not sure |
|--------|-------|-------------|

11. Which of the following "best" describes your marital status?
0. Not Married
 1. Married: Spouse is a civilian employed outside home.
 2. Married: Spouse is a civilian employed outside home-geographically separated.
 3. Married: Spouse not employed outside home.
 4. Married: Spouse not employed outside home-geographically separated.
 5. Married: Spouse is a military member.
 6. Married: Spouse is a military member-geographically separated.
 7. Single Parent.
12. What is your usual work schedule?
1. Day shift, normally stable hours.
 2. Swing shift (about 1600-2400)
 3. Mid shift (about 2400-0800)
 4. Rotating shift schedule
 5. Day or shift work with irregular/unstable hours.
 6. Frequent TDY/travel or frequently on-call to report to work.
 7. Crew schedule.
13. How often does your supervisor hold group meetings?
- | | |
|-----------------|-----------------|
| 1. Never | 4. Weekly |
| 2. Occasionally | 5. Daily |
| 3. Monthly | 6. Continuously |
14. How often are group meetings used to solve problems and establish goals?
- | | |
|-----------------|------------------------|
| 1. Never | 3. About half the time |
| 2. Occasionally | 4. All of the time |
15. What is your aeronautical rating and current status?
- | | |
|-----------------------------|----------------------------------|
| 1. Nonrated, not on aircrew | 3. Rated, in crew/operations job |
| 2. Nonrated, now on aircrew | 4. Rated, in support job |
16. Which of the following best describes your career or employment intentions?
1. Planning to retire in the next 12 months
 2. Will continue in/with the Air Force as a career
 3. Will most likely continue in/with the Air Force as a career
 4. May continue in/with the Air Force
 5. Will most likely not make the Air Force a career
 6. Will separate/terminate from the Air Force as soon as possible

JOB INVENTORY

Below are items which relate to your job. Read each statement carefully and then decide to what extent the statement is true of your job. Indicate the extent to which the statement is true for your job by choosing the phrase which best represents your job.

- | | |
|-----------------------------|------------------------------|
| 1 = Not at all | 5 = To a fairly large extent |
| 2 = To a very little extent | 6 = To a great extent |
| 3 = To a little extent | 7 = To a very great extent |
| 4 = To a moderate extent | |

Select the corresponding number for each question and enter it on the separate response sheet.

17. To what extent does your job require you to do many different things, using a variety of your talents and skills?
18. To what extent does your job involve doing a whole task or unit of work?
19. To what extent is your job significant, in that it affects others in some important way?
20. To what extent does your job provide a great deal of freedom and independence in scheduling your work?
21. To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it?
22. To what extent are you able to determine how well you are doing your job without feedback from anyone else?
23. To what extent do additional duties interfere with the performance of your primary job?
24. To what extent do you have adequate tools and equipment to accomplish your job?
25. To what extent is the amount of work space provided adequate?
26. To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?
27. To what extent does doing your job well affect a lot of people?
28. To what extent does your job provide you with the chance to finish completely the piece of work you have begun?

1 = Not at all
2 = To a very little extent
3 = To a little extent
4 = To a moderate extent

5 = To a fairly large extent
6 = To a great extent
7 = To a very great extent

29. To what extent does your job require you to use a number of complex skills?
30. To what extent does your job give you freedom to do your work as you see fit?
31. To what extent are you allowed to make the major decisions required to perform your job well?
32. To what extent are you proud of your job?
33. To what extent do you feel accountable to your supervisor in accomplishing your job?
34. To what extent do you know exactly what is expected of you in performing your job?
35. To what extent are your job performance goals difficult to accomplish?
36. To what extent are your job performance goals clear?
37. To what extent are your job performance goals specific?
38. To what extent are your job performance goals realistic?
39. To what extent do you perform the same tasks repeatedly within a short period of time?
40. To what extent are you faced with the same type of problem on a weekly basis?
41. To what extent are you aware of promotion/advancement opportunities that affect you?
42. To what extent do co-workers in your work group maintain high standards of performance?
43. To what extent do you have the opportunity to progress up your career ladder?
44. To what extent are you being prepared to accept increased responsibility?
45. To what extent do people who perform well receive recognition?
46. To what extent does your work give you a feeling of pride?

1 = Not at all
2 = To a very little extent
3 = To a little extent
4 = To a moderate extent

5 = To a fairly large extent
6 = To a great extent
7 = To a very great extent

- 47. To what extent do you have the opportunity to learn skills which will improve your promotion potential?
- 48. To what extent do you have the necessary supplies to accomplish your job?
- 49. To what extent do details (tasks not covered by primary or additional duty descriptions) interfere with the performance of your primary job?
- 50. To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?

JOB DESIRES

The statements below deal with job related characteristics. Read each statement and choose the response which best represents how much you would like to have each characteristic in your job.

In my job, I would like to have the characteristics described:

1 = Not at all
2 = A slight amount
3 = A moderate amount
4 = A fairly large amount

5 = A large amount
6 = A very large amount
7 = An extremely large amount

- 51. Opportunities to have independence in my work.
- 52. A job that is meaningful.
- 53. An opportunity for personal growth in my job.
- 54. Opportunities in my work to use my skills.
- 55. Opportunities to perform a variety of tasks.
- 56. A job in which tasks are repetitive.
- 57. A job in which tasks are relatively easy to accomplish.

SUPERVISION

The statements below describe characteristics of managers or supervisors. Indicate your agreement by choosing the phrase which best represents your attitude concerning your supervisor.

- | | |
|--------------------------------|----------------------|
| 1 = Strongly disagree | 5 = Slightly agree |
| 2 = Moderately disagree | 6 = Moderately agree |
| 3 = Slightly disagree | 7 = Strongly agree |
| 4 = Neither agree nor disagree | |

Select the corresponding number for each statement and enter it on the separate response sheet.

58. My supervisor is a good planner.
59. My supervisor sets high performance standards.
60. My supervisor encourages teamwork.
61. My supervisor represents the group at all times.
62. My supervisor establishes good work procedures.
63. My supervisor has made his responsibilities clear to the group.
64. My supervisor fully explains procedures to each group member.
65. My supervisor performs well under pressure.
66. My supervisor takes time to help me when needed.
67. My supervisor asks members for their ideas on task improvements.
68. My supervisor explains how my job contributes to the overall mission.
69. My supervisor helps me set specific goals.
70. My supervisor lets me know when I am doing a good job.
71. My supervisor lets me know when I am doing a poor job.
72. My supervisor always helps me improve my performance.
73. My supervisor insures that I get job related training when needed.
74. My job performance has improved due to feedback received from my supervisor.

75. When I need technical advice, I usually go to my supervisor.
76. My supervisor frequently gives me feedback on how well I am doing my job.

WORK GROUP PRODUCTIVITY

The statements below deal with the output of your work group. The term "your work group" refers to you and your co-workers who work for the same supervisor. Indicate your agreement with the statement by selecting the phrase which best expresses your opinion.

- | | |
|-------------------------|--------------------------------|
| 1 = Strongly disagree | 4 = Neither agree nor disagree |
| 2 = Moderately disagree | 5 = Slightly agree |
| 3 = Slightly disagree | 6 = Moderately agree |
| | 7 = Strongly agree |

Select the corresponding number for each statement and enter it on the separate response sheet.

77. The quantity of output of your work group is very high.
78. The quality of output of your work group is very high.
79. When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations.
80. Your work group always gets maximum output from available resources (e.g., personnel and material).
81. Your work group's performance in comparison to similar work groups is very high.

ORGANIZATION CLIMATE

Below are items which describe characteristics of your organization. The term "your organization" refers to your squadron or staff agency. Indicate your agreement by choosing the phrase which best represents your opinion concerning your organization.

- | | |
|--------------------------------|----------------------|
| 1 = Strongly disagree | 5 = Slightly agree |
| 2 = Moderately disagree | 6 = Moderately agree |
| 3 = Slightly disagree | 7 = Strongly agree |
| 4 = Neither agree nor disagree | |

Select the corresponding number for each item and enter it on the separate response sheet.

1 = Strongly disagree
2 = Moderately disagree
3 = Slightly disagree
4 = Neither agree or disagree

5 = Slightly agree
6 = Moderately agree
7 = Strongly agree

82. Ideas developed by my work group are readily accepted by management personnel above my supervisor.
83. My organization provides all the necessary information for me to do my job effectively.
84. My organization provides adequate information to my work group.
85. My work group is usually aware of important events and situations.
86. My complaints are aired satisfactorily.
87. My organization is very interested in the attitudes of the group members toward their jobs.
88. My organization has a very strong interest in the welfare of its people.
89. I am very proud to work for this organization.
90. I feel responsible to my organization in accomplishing its mission.
91. The information in my organization is widely shared so that those needing it have it available.
92. Personnel in my unit are recognized for outstanding performance.
93. I am usually given the opportunity to show or demonstrate my work to others.
94. There is a high spirit of teamwork among my co-workers.
95. There is outstanding cooperation between work groups of my organization.
96. My organization has clear-cut goals.
97. I feel motivated to contribute my best efforts to the mission of my organization.
98. My organization rewards individuals based on performance.
99. The goals of my organization are reasonable.
100. My organization provides accurate information to my work group.

JOB RELATED ISSUES

The items below are used to determine how satisfied you are with specific job related issues. Indicate your degree of satisfaction or dissatisfaction with each issue by choosing the most appropriate phrase.

- | | |
|--|--------------------------|
| 1 = Extremely dissatisfied | 5 = Slightly satisfied |
| 2 = Moderately dissatisfied | 6 = Moderately satisfied |
| 3 = Slightly dissatisfied | 7 = Extremely satisfied |
| 4 = Neither satisfied nor dissatisfied | |

Select the corresponding number for each question and enter it on the separate response sheet.

101. Feeling of Helpfulness
The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others.
102. Co-Worker Relationship
My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers.
103. Family Attitude Toward Job
The recognition and the pride my family has in the work I do.
104. On-the-Job Training (OJT)
The OJT instructional methods and instructors' competence.
105. Technical Training (Other than OJT)
The technical training I have received to perform my current job.
106. Work Schedule
My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week.
107. Job Security
108. Acquired Valuable Skills
The chance to acquire valuable skills in my job which prepare me for future opportunities.
109. My Job as a Whole

APPENDIX C

OAP FACTORS AND VARIABLES

ORGANIZATIONAL

ASSESSMENT

PACKAGE



FACTORS AND VARIABLES

LEADERSHIP
AND
MANAGEMENT
DEVELOPMENT
CENTER

AIR UNIVERSITY
MAXWELL AFB, ALABAMA

GENERAL INFORMATION

The purpose of the Organizational Assessment Package (OAP) Users Guide is to provide the information necessary to understand and effectively use the OAP system. The material in this guide is intended to identify and define the OAP factors and variables. This guide is divided into sections that include:

SECTION 1: Definitions of OAP Factors

SECTION 2: OAP Demographic Items

SECTION 3: Work Itself

SECTION 4: Job Enrichment

SECTION 5: Work Group Process

SECTION 6: Work Group Output

SECTION 7: OAP Variables (Listed numerically and cross-referenced)

The OAP was developed for use by the Air Force Leadership and Management Development Center (LMDC), Maxwell AFB, Alabama. The objectives of the OAP are to:

1. Inform commanders, managers, supervisors, and functional staff agencies of the nature, magnitude, level, scope, and source of current and potential leadership and management strengths and problems.
2. Provide inputs to Air Force education and training programs, to increase instructional effectiveness, and to provide inputs for curriculum development.
3. Provide feedback for improving the effectiveness of the LMDC Management Consultation Teams.
4. Develop LMDC training programs for management consultants to expand their consulting capabilities in areas which would best serve needs of the Air Force and specific organizations.
5. Provide a wide, varied, and creditable data base for research in the fields of leadership and management as well as research into jobs and career fields.
6. Provide an Air Force-wide management information system for decision making.

The principle instrument of the OAP is a 109 question survey which is administered as a first step in a LMDC consultant visit to a base. In addition to the demographic items, the OAP survey contains attitudinal questions which are grouped to form 25 factors. The questions making up the factors are designed to solicit responses from individuals on a wide range of job related factors as well as factors relating to supervision, communications, and performance within the organization. The allowable responses to the survey questions range from one, indicating disagreement or dissatisfaction, to seven, indicating a high level of agreement or satisfaction.

The factors measured by the OAP are grouped into a systems model to assess three aspects of a work group: input, process, and output (adapted from McGrath's model).

Input. In LMDC's adaptation of the model, input is comprised of demographics, work itself, and job enrichment.

A. Demographics. Descriptive or background information about the respondents to the OAP survey (see section 2 for a list of demographic items).

B. Work Itself. The work itself has to do with the task properties (technologies) and environmental conditions of the job. It assesses the patterns of characteristics members bring to the group or organization, and patterns of differentiation and integration among position and roles. The following OAP factors measure the work itself:

- 806 - Job Desires (Need For Enrichment)
- 810 - Job Performance Goals
- 812 - Task Characteristics
- 813 - Task Autonomy
- 814 - Work Repetition
- 816 - Desired Repetitive Easy Tasks
- 823 - Job Related Training
- Job Influences (not a statistical factor)

C. Job Enrichment. Measures the degree to which the job itself is interesting, meaningful, challenging, and responsible. The following OAP factors measure job enrichment:

- 800 - Skill Variety
- 801 - Task Identity
- 802 - Task Significance
- 804 - Job Feedback
- 806 - Need for Enrichment Index (Job Desires)
- 807 - Job Enrichment Index
- 808 - OJ1 Total Score
- 809 - Job Motivation Index - Additive
- 825 - Motivation Potential Score

Work Group Process. The work group process assesses the pattern of activity and interaction among the group members. The following OAP factors measure leadership and the work group process:

- 805 - Performance Barriers/Blockages (Work Support)
- 818 - Management and Supervision
- 819 - Supervisory Communications Climate
- 820 - Organizational Communications Climate
- Work Interferences (not a statistical factor)
- Supervisory Assistance (not a statistical factor)

Work Group Output. Measures task performance, group development, and effects on group members. Assesses the quantity and quality of task performance and alteration of the group's relation to the environment. Assesses changes in positions and role patterns, and in the development of norms. Assesses changes on skills and attitudes, and effects on adjustment. The following OAP factors measure the work group output:

- 811 - Pride
- 817 - Advancement/Recognition
- 821 - Work Group Effectiveness (Perceived Productivity)
- 822 - Job Related Satisfaction
- 824 - General Organizational Climate

Section 1

DEFINITIONS OF OAP FACTORS

(STATISTICAL FACTORS)

800 Skill Variety: Measures the degree to which a job requires a variety of different tasks or activities in carrying out the work, which involve the use of a number of different skills and talents of the worker. A key is that the skills required are valued by the worker.

801 Task Identity: Measures the degree to which the job requires completion of a "whole" and identifiable piece of work from beginning to end.

802 Task Significance: Measures the degree to which the job has a substantial impact on the lives or work of others; the importance of the job.

803 (Not Used)

804 Job Feedback: Measures the degree to which carrying out the work activities required by the job results in the worker obtaining clear and direct information about job outcomes or information on good and poor performance.

805 Performance Barriers/Blockages (Work Support): Measures the degree to which work performance is hindered by additional duties, details, inadequate tools, equipment, or work space.

806 Need for Enrichment Index (Job Desires): Refers to the job related characteristics (autonomy, personal growth, use of skills, etc.) that the individual would like in a job.

807 Job Motivation Index: A composite index derived from the job characteristics that reflects the overall "motivational aspects" of a job; the degree to which a job prompts high internal work motivation on the part of job incumbents.

808 QJI Total Score: A composite index derived from the job characteristics that reflects one's perception of motivation provided by the job itself as opposed to motivation provided by others. This factor is similar to the other job motivation factors, but it employs a slightly different theory in arriving at the results.

809 Job Motivation Index - Additive: This factor employs a variation of theory used by the other job motivation factors.

810 Job Performance Goals: Measures the degree to which job performance goals are clear, specific, realistic, understandable, and challenging.

811 Pride: Measures the pride in one's work.

812 Task Characteristics: A combination of skill variety, task identity, task significance, and job feedback designed to measure several aspects of one's job.

813 Task Autonomy: Measures the degree to which the job provides freedom to do the work as one sees fit; discretion in scheduling, decision-making, and means for accomplishing a job.

814 Work Repetition: Measures the extent to which one performs the same tasks or faces the same type of problems in his or her job on a regular basis.

816 Desired Repetitive Easy Tasks: Measures the extent to which one desires his or her job to involve repetitive tasks or tasks that are easy to accomplish.

817 Advancement/Recognition: Measures one's awareness of advancement and recognition, and feelings of being prepared (i.e., learning new skills for promotion).

818 Management and Supervision: Measures the degree to which the worker has high performance standards and good work procedures. Measures support and guidance received, and the overall quality of supervision.

819 Supervisory Communications Climate: Measures the degree to which the worker perceives that there is good rapport with supervisors; that there is a good working environment; that innovation for task improvement is encouraged, and that rewards are based upon performance.

820 Organizational Communications Climate: Measures the degree to which the worker perceives that there is an open communications environment in the organization, and that adequate information is provided to accomplish the job.

821 Work Group Effectiveness (Perceived Productivity): Measures one's view of the quantity, quality and efficiency of work generated by his or her work group.

822 Job Related Satisfaction: Measures the degree to which the worker is generally satisfied with factors surrounding the job.

823 Job Related Training: Measures the extent to which one is satisfied with on-the-job and technical training received.

824 General Organizational Climate: Measures the individual's perception of his or her organizational environment as a whole (i.e., spirit of team work, communications, organizational pride, etc.).

825 Motivation Potential Score: This factor employs a variation of theory used by the other job motivation factors. It ranges between 0 and 343 with 109 being the Air Force average. Low scores indicate a poorly motivating job.

(NON-STATISTICAL FACTORS)

Job Influences: Refers to worker's feelings of accountability to his or her supervisor, and standards of performance.

Work Interferences: Identifies things which impede an individual's job performance.

Supervisory Assistance: Measures the extent to which a supervisor helps the subordinate.

Section 2

OAP DEMOGRAPHIC ITEMS

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
-	-	Supervisor's Code
-	-	Work Group Code
-	-	Sex
-	-	Your age is
-	-	You are (officer, enlisted, GS, etc.)
-	-	Your pay grade is
-	-	Primary AFSC
-	-	Duty AFSC
(Note: The above items are contained on the response sheet.)		
001	-	(Not Used)
002	-	(Not Used)
003	1	Total years in the Air Force:
		1. Less than 1 year
		2. More than 1 year, less than 2 years
		3. More than 2 years, less than 3 years
		4. More than 3 years, less than 4 years
		5. More than 4 years, less than 8 years
		6. More than 8 years, less than 12 years
		7. More than 12 years
004	2	Total months in present career field:
		1. Less than 1 month
		2. More than 1 month, less than 6 months
		3. More than 6 months, less than 12 months
		4. More than 12 months, less than 18 months
		5. More than 18 months, less than 24 months
		6. More than 24 months, less than 36 months
		7. More than 36 months
005	3	Total months at this station:
		1. Less than 1 month
		2. More than 1 month, less than 6 months
		3. More than 6 months, less than 12 months
		4. More than 12 months, less than 18 months
		5. More than 18 months, less than 24 months
		6. More than 24 months, less than 36 months
		7. More than 36 months

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
006	4	Total months in present position:
		1. Less than 1 month
		2. More than 1 month, less than 6 months
		3. More than 6 months, less than 12 months
		4. More than 12 months, less than 18 months
		5. More than 18 months, less than 24 months
		6. More than 24 months, less than 36 months
		7. More than 36 months
007	5	Your Ethnic Group is:
		1. American Indian or Alaskan Native
		2. Asian or Pacific Islander
		3. Black, not of Hispanic Origin
		4. Hispanic
		5. White, not of Hispanic Origin
		6. Other
008	11	Which of the following "best" describes your marital status?
		0. Not married.
		1. Married: Spouse is a civilian employed outside home.
		2. Married: Spouse is a civilian employed outside home - geographically separated.
		3. Married: Spouse not employed outside home.
		4. Married: Spouse not employed outside home - geographically separated.
		5. Married: Spouse is a military member.
		6. Married: Spouse is a military member - geographically separated.
		7. Single parent.

NOTE: Variable 008, statement 11, was added to the OAP on 19 Jan. 80 and replaced variable 014 which appears on page 3. Although no longer used, Variable 014 is still shown because data collected from about 25,000 samples for this variable remains in the data base.

009	6	Your highest education level obtained is:
		1. Non-high school graduate
		2. High school graduate or GED
		3. Less than two years college
		4. Two years or more college
		5. Bachelors Degree
		6. Masters Degree
		7. Doctoral Degree

Section 2 (Continued)

OAP DEMOGRAPHIC ITEMS

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT	VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
010	7	Highest level of professional military education (residence or correspondence): 0. None or not applicable 1. MCO Orientation Course or USAF Supervisor Course (MCO Phase 1 or 2) 2. MCO Leadership School (MCO Phase 3) 3. MCO Academy (MCO Phase 4) 4. Senior MCO Academy (MCO Phase 5) 5. Squadron Officer School 6. Intermediate Service School (i.e., ACSC, AFSC) 7. Senior Service School (i.e., AMC, ICAF, NMC)	015	12	What is your usual work schedule? 1. Day shift, normally stable hours 2. Swing shift (about 1600-2400) 3. Mid shift (about 2400-0800) 4. Rotating shift schedule 5. Day or shift work with irregular/unstable hours 6. Frequent TDY/travel or frequently on-call to report to work 7. Crew schedule
011	8	How many people do you directly supervise? 1. None 2. 1 3. 2 4. 3 5. 4 to 5 6. 6 to 8 7. 9 or more	016	13	How often does your supervisor hold group meetings? 1. Never 2. Occasionally 3. Monthly 4. Weekly 5. Daily 6. Continuously
012	9	For how many people do you write performance reports? 1. None 2. 1 3. 2 4. 3 5. 4 to 5 6. 6 to 8 7. 9 or more	017	14	How often are group meetings used to solve problems and establish goals? 1. Never 2. Occasionally 3. About half the time 4. All of the time
013	10	Does your supervisor actually write your performance reports? 1. Yes 2. No 3. Not Sure	018	15	What is your aeronautical rating and current status? 1. Nonrated, not on aircrew 2. Nonrated, now on aircrew 3. Rated, in crew/operations job 4. Rated, in support job
014	11	Your work requires you to work primarily: 1. Alone 2. With one or two people 3. As a small work group (3-5 people) 4. As a large work group (6 or more people) 5. Other	019	16	Which of the following best describes your career or employment intentions? 1. Planning to retire in the next 12 months 2. Will continue in/with the Air Force as a career 3. Will most likely continue in/with the air force 4. May continue in/with the Air Force 5. Will most likely not make the Air Force a career 6. Will separate/terminate from the Air Force as soon as possible

Section 3

WORK ITSELF

FACTOR 806 - JOB DESIRES (NEED FOR ENRICHMENT INDEX): Has to do with job related characteristics (autonomy, personal growth, use of skills, etc.) that the individual would like in a job.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
		(In my job, I would like to have the characteristics described--from "not at all" to "an extremely large amount")
249	51	Opportunities to have independence in my work.
250	52	A job that is meaningful.
251	53	The opportunity for personal growth in my job.
252	54	Opportunities in my work to use my skills.
253	55	Opportunities to perform a variety of tasks.

2

FACTOR 810 - JOB PERFORMANCE GOALS: Measures the extent to which job performance goals are clear, specific, realistic, understandable, and challenging.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
217	34	To what extent do you know exactly what is expected of you in performing your job?
218	35	To what extent are your job performance goals difficult to accomplish?
273	36	To what extent are your job performance goals clear?
274	37	To what extent are your job performance goals specific?
221	38	To what extent are your job performance goals realistic?

FACTOR 812 - TASK CHARACTERISTICS: A combination of skill variety, task identity, task significance, and job feedback designed to measure several aspects of one's job.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
201	17	To what extent does your job require you to do many different things, using a variety of your talents and skills?
202	18	To what extent does your job involve doing a whole task or unit of work?
203	19	To what extent is your job significant, in that it affects others in some important way?
272	22	To what extent are you able to determine how well you are doing your job without feedback from anyone else?
209	26	To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?
210	27	To what extent does doing your job well affect a lot of people?
211	28	To what extent does your job provide you with a chance to finish completely the piece of work you have begun?
212	29	To what extent does your job require you to use a number of complex skills?

Section 3 (Continued)

WORK ITSELF

FACTOR 813 - TASK AUTONOMY: Measures the degree to which the job provides freedom to do the work as one sees fit; discretion in scheduling, decision making, and means for accomplishing a job.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
270	20	To what extent does your job provide a great deal of freedom and independence in scheduling your work?
271	21	To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it?
213	30	To what extent does your job give you freedom to do your work as you see fit?
214	31	To what extent are you allowed to make the major decisions required to perform your job well?

FACTOR 814 - WORK REPETITION: Measures the extent to which one performs the same tasks or faces the same type of problems in his or her job on a regular basis.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
226	39	To what extent do you perform the same tasks repeatedly within a short period of time?
227	40	To what extent are you faced with the same type of problem on a weekly basis?

FACTOR 816 - DESIRED REPETITIVE EASY TASKS: Measures the extent to which one desires his or her job to involve repetitive tasks or tasks that are easy to accomplish.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
255	56	A job in which tasks are repetitive.
258	57	A job in which tasks are relatively easy to accomplish.

FACTOR 823 - JOB RELATED TRAINING: Measures the extent to which one is satisfied with on-the-job and technical training received.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
711	104	On-the-Job Training (OJT) The OJT instructional methods and instructors' competence.
712	105	Technical Training (Other than OJT) The technical training I have received to perform my current job.

FACTOR - JOB INFLUENCES (NOT A STATISTICAL FACTOR):

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
216	33	To what extent do you feel accountable to your supervisor in accomplishing your job?
238	42	To what extent do co-workers in your work group maintain high standards of performance?

Section 4

JOB ENRICHMENT

FACTOR 800 - SKILL VARIETY: Measures the degree to which a job requires a variety of different tasks or activities in carrying out the work; involves the use of a number of different skills and talents of the worker; skills required are valued by the worker.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
201	17	To what extent does your job require you to do many different things, using a variety of your talents and skills?
212	29	To what extent does your job require you to use a number of complex skills?

FACTOR 801 - TASK IDENTITY: Measures the degree to which the job requires completion of a "whole" and identifiable piece of work from beginning to end.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
202	18	To what extent does your job involve doing a whole task or unit of work?
211	28	To what extent does your job provide you with a chance to finish completely the piece of work you have begun?

FACTOR 802 - TASK SIGNIFICANCE: Measures the degree to which the job has a substantial impact on the lives or work of others; the importance of the job.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
203	19	To what extent is your job significant, in that it affects others in some important way?
210	27	To what extent does doing your job well affect a lot of people?

FACTOR 804 - JOB FEEDBACK: Measures the degree to which carrying out the work activities required by the job results in the worker obtaining clear and direct information about job outcomes or information on good and poor performance.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
272	22	To what extent are you able to determine how well you are doing your job without feedback from anyone else?
209	26	To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?

FACTOR 806 - NEED FOR ENRICHMENT INDEX (JOB DESIRES): Has to do with job related characteristics (autonomy, personal growth, use of skills, etc.) that the individual would like in a job.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
(In my job, I would like to have the characteristics described--from "not at all" to "an extremely large amount")		
249	51	Opportunities to have independence in my work.
250	52	A job that is meaningful.
251	53	The opportunity for personal growth in my job.
252	54	Opportunities in my work to use my skills.
253	55	Opportunities to perform a variety of tasks.

Section 4 (Continued)

JOB ENRICHMENT

FACTOR 807 - JOB MOTIVATION INDEX: A composite index derived from the six job characteristics that reflect the overall "motivating potential" of a job; the degree to which a job will prompt high internal work motivation on the part of job incumbents.

800 Skill Variety
801 Task Identity
802 Task Significance
804 Job Feedback
805 Work Support
813 Task Autonomy

Formula: $((800+801+802+805)/4)(813)(804)$

FACTOR 808 - QJI TOTAL SCORE: Assesses one's perception of motivation provided by his or her job. This factor is a variation of theory employed by other job motivation factors. Score is computed using the variables in the following formula:

$(V201+V202+V203+V270+V271+V272$
 $+8-V206+V207+V208+V209+V210$
 $+V211+V212+V213)$

FACTOR 809 - JOB MOTIVATION INDEX - ADDITIVE: This factor is a variation of theory employed by other job motivation factors. Index is computed using the following factors:

800 Skill Variety
801 Task Identity
802 Task Significance
804 Work Repetition
805 Work Support
813 Task Autonomy

Formula: $((800+801+802+805)/4)+813+804$

FACTOR 825 - MOTIVATION POTENTIAL SCORE: This factor is another variation of theory employed by other job motivation factors. It ranges between 0 and 343 with 109 being the Air Force average. Low scores indicate a poorly motivating job. Score is computed using the following factors:

800 Skill Variety
801 Task Identity
802 Task Significance
804 Job Feedback
813 Task Autonomy

Formula: $(800+801+802)/3+(813)(804)$

Section 5

WORK GROUP PROCESS

FACTOR 605 - PERFORMANCE BARRIERS/BLOCKAGES (WORK SUPPORT): Measures the degree to which work performance is hindered by additional duties, details, inadequate tools, equipment, or work space.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
206	23	To what extent do additional duties interfere with the performance of your primary job?
207	24	To what extent do you have adequate tools and equipment to accomplish your job?
208	25	To what extent is the amount of work space provided adequate?

Formula (8-206+207+208)/3

46

FACTOR 818 - MANAGEMENT AND SUPERVISION: Measures the degree to which the worker has high performance standards and good work procedures. Measures support and guidance received, and the overall quality of supervision.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
404	58	My supervisor is a good planner.
405	59	My supervisor sets high performance standards.
410	60	My supervisor encourages teamwork.
411	61	My supervisor represents the group at all times.
412	62	My supervisor establishes good work procedures.
413	63	My supervisor has made his responsibilities clear to the group.
445	64	My supervisor fully explains procedures to each group member.
416	65	My supervisor performs well under pressure.

FACTOR - WORK INTERFERENCES (NOT A STATISTICAL FACTOR): Identifies things which impede an individual's job performance.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
277	48	To what extent do you have the necessary supplies to accomplish your job?
278	49	To what extent do details (task not covered by primary or additional duty descriptions) interfere with the performance of your primary job?
279	50	To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?

FACTOR 819 - SUPERVISORY COMMUNICATIONS CLIMATE: Measures the degree to which the worker perceives that there is good rapport with supervisors; that there is a good working environment; that innovation for task improvement is encouraged, and that rewards are based upon performance.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
426	67	My supervisor asks members for their ideas on task improvements.
428	68	My supervisor explains how my job contributes to the overall mission.
431	69	My supervisor helps me set specific goals.
433	70	My supervisor lets me know when I am doing a good job.
435	72	My supervisor always helps me improve my performance.
436	73	My supervisor insures that I get job related training when needed.
437	74	My job performance has improved due to feedback received from my supervisor.
442	76	My supervisor frequently gives me feedback on how well I am doing my job.

Section 5 (Continued)

WORK GROUP PROCESS

FACTOR 820 - ORGANIZATIONAL COMMUNICATIONS CLIMATE: Measures the degree to which the worker perceives that there is an open communications environment in the organization, and that adequate information is provided to accomplish the job.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
300	82	Ideas developed by my work group are readily accepted by management personnel above my supervisor.
301	83	My organization provides all the necessary information for me to do my job effectively.
302	84	My organization provides adequate information to my work group.
303	85	My work group is usually aware of important events and situations.
304	86	My complaints are aired satisfactorily.
309	91	The information in my organization is widely shared so that those needing it have it available.
314	96	My organization has clear-cut goals.
317	99	The goals of my organization are reasonable.
318	100	My organization provides accurate information to my work group.

SUPERVISORY ASSISTANCE (NOT A STATISTICAL FACTOR): Measures the extent to which a supervisor helps the subordinate.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
424	66	My supervisor takes time to help me when needed.
436	71	My supervisor lets me know when I am doing a poor job.
439	75	When I need technical advice, I usually go to my supervisor.

Section 6

WORK GROUP OUTPUT

FACTOR 811 - PRIDE: Measures the pride in one's work.

215	32	To what extent are you proud of your job?
275	46	To what extent does your work give you a feeling of pride?

FACTOR 817 - ADVANCEMENT/RECOGNITION: Measures one's awareness of advancement and recognition, and feelings of being prepared (i.e., learning new skills for promotion).

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
234	41	To what extent are you aware of promotion/advancement opportunities that affect you?
239	43	To what extent do you have the opportunity to progress up your career ladder?
240	44	To what extent are you being prepared to accept increased responsibility?
241	45	To what extent do people who perform well receive recognition?
276	47	To what extent do you have the opportunity to learn skills which will improve your promotion potential?

FACTOR 821 - WORK GROUP EFFECTIVENESS (PERCEIVED PRODUCTIVITY): Measures one's view of the quantity, quality, and efficiency of work generated by his or her work group.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
259	77	The quantity of output of your work group is very high
260	78	The quality of output of your work group is very high
261	79	When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations
264	80	Your work group always gets maximum output from available resources (e.g., personnel and material)
265	81	Your work group's performance in comparison to similar work groups is very high

Section 6 (Continued)

WORK GROUP OUTPUT

FACTOR 822 - JOB RELATED SATISFACTION: Measures the degree to which the worker is generally satisfied with factors surrounding the job.

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
705	101	Feeling of Helpfulness The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others.
709	102	Co-worker Relationships My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers.
710	103	Family Attitude Toward Job The recognition and the pride my family has in the work I do.
717	106	Work Schedule My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week.
718	107	Job Security
719	108	Acquired Valuable Skills The chance to acquire valuable skills in my job which prepare me for future opportunities.
723	109	My Job as a Whole

FACTOR 824 - GENERAL ORGANIZATIONAL CLIMATE: Measures the individual's perception of his or her organizational environment as a whole (i.e. spirit of team work, communications, organizational pride, etc.).

VARIABLE NUMBER	STATEMENT NUMBER	STATEMENT
305	87	My organization is very interested in the attitudes of the group members toward their jobs.
306	88	My organization has a very strong interest in the welfare of its people.
307	89	I am very proud to work for this organization.
308	90	I feel responsible to my organization in accomplishing its mission.
310	92	Personnel in my unit are recognized for outstanding performance.
311	93	I am usually given the opportunity to show or demonstrate my work to others.
312	94	There is a high spirit of teamwork among my co-workers.
313	95	There is outstanding cooperation between work groups of my organization.
315	97	I feel motivated to contribute my best efforts to the mission of my organization.
316	98	My organization rewards individuals based on performance.

Section 7

OAP VARIABLES

VARIABLE NUMBER	FACTOR	STATEMENT	STATEMENT NUMBER	VARIABLE NUMBER	FACTOR	STATEMENT	STATEMENT NUMBER
201	800/812	To what extent does your job require you to do many different things, using a variety of your talents and skills?	17	215	811	To what extent are you proud of your job?	32
202	801/812	To what extent does your job involve doing a whole task or unit of work?	18	216	(Note)	To what extent do you feel accountable to your supervisor in accomplishing your job?	33
203	802/812	To what extent is your job significant, in that it affects others in some important way?	19	217	810	To what extent do you know exactly what is expected of you in performing your job?	34
204	-	(Not Used)	-	218	810	To what extent are your job performance goals difficult to accomplish?	35
205	-	(Not Used)	-	219	-	(Not Used)	-
206	805	To what extent do additional duties interfere with the performance of your primary job?	23	220	-	(Not Used)	-
207	805	To what extent do you have adequate tools and equipment to accomplish your job?	24	221	810	To what extent are your job performance goals realistic?	38
208	805	To what extent is the amount of work space provided adequate?	25	222	-	(Not Used)	-
209	804/812	To what extent does your job provide the chance to know for yourself when you do a good job, and to be responsible for your own work?	26	223	-	(Not Used)	-
210	802/812	To what extent does doing your job well affect a lot of people?	27	224	-	(Not Used)	-
211	801/812	To what extent does your job provide you with a chance to finish completely the piece of work you have begun?	28	225	-	(Not Used)	-
212	800/812	To what extent does your job require you to use a number of complex skills?	29	226	814	To what extent do you perform the same tasks repeatedly within a short period of time?	39
213	813	To what extent does your job give you freedom to do your work as you see fit?	30	227	814	To what extent are you faced with the same type of problem on a weekly basis?	40
214	813	To what extent are you allowed to make the major decisions required to perform your job well?	31	228	-	(Not Used)	-
				229	-	(Not Used)	-
				230	-	(Not Used)	-
				231	-	(Not Used)	-
				232	-	(Not Used)	-
				233	-	(Not Used)	-

Note: This variable is an element of "Job Influences" (not a statistical factor).

Section 7 (Continued)

OAP VARIABLES

VARIABLE NUMBER	FACTOR	STATEMENT NUMBER	STATEMENT	VARIABLE NUMBER	FACTOR	STATEMENT NUMBER	STATEMENT
234	817	41	To what extent are you aware of promotion/advancement opportunities that affect you?	251	806	53	The opportunity for personal growth in my job
235	-	-	(Not Used)	252	806	54	Opportunities in my work to use my skills
236	-	-	(Not Used)	253	806	55	Opportunities to perform a variety of tasks
237	-	-	(Not Used)	254	-	-	(Not Used)
238	(Note)	42	To what extent do co-workers in your work group maintain high standards of performance?	255	816	56	A job in which tasks are repetitive.
239	817	43	To what extent do you have the opportunity to progress up your career ladder?	256	-	-	(Not Used)
240	817	44	To what extent are you being prepared to accept increased responsibility?	257	-	-	(Not Used)
241	817	45	To what extent do people who perform well receive recognition?	258	816	57	A job in which tasks are relatively easy to accomplish.
242	-	-	(Not Used)	259	821	77	The quantity of output of your work group is very high
243	-	-	(Not Used)	260	821	78	The quality of output of your work group is very high
244	-	-	(Not Used)	261	821	79	When high priority work arises, such as short suspenses, crash programs, and schedule changes, the people in my work group do an outstanding job in handling these situations
245	-	-	(Not Used)	262	-	-	(Not Used)
246	-	-	(Not Used)	263	-	-	(Not Used)
247	-	-	(Not Used)	264	821	80	Your work group always gets maximum output from available resources (e.g., personnel and material)
248	-	-	(Not Used)	265	821	81	Your work group's performance in comparison to similar work groups is very high
(In my job, I would like to have the characteristics described--from "not at all" to "an extremely large amount")							
249	806	51	Opportunities to have independence in my work?	266	-	-	(Not Used)
250	806	52	A job that is meaningful	267	-	-	(Not Used)

Note: This variable is an element of "job influences" (not a statistical factor).

Section 7 (Continued)

OAP VARIABLES

VARIABLE NUMBER	FACTOR	STATEMENT NUMBER	STATEMENT	VARIABLE NUMBER	FACTOR	STATEMENT NUMBER	STATEMENT
268	-	-	(Not Used)	300	820	82	Ideas developed by my work group are readily accepted by management personnel above my supervisor.
269	-	-	(Not Used)	301	820	83	My organization provides all the necessary information for me to do my job effectively.
270	813	20	To what extent does your job provide a great deal of freedom and independence in scheduling your work?	302	820	84	My organization provides adequate information to my work group.
271	813	21	To what extent does your job provide a great deal of freedom and independence in selecting your own procedures to accomplish it?	303	820	85	My work group is usually aware of important events and situations.
272	804/812	22	To what extent are you able to determine how well you are doing your job without feedback from anyone else?	304	820	86	My complaints are aired satisfactorily.
273	810	36	To what extent are your job performance goals clear?	305	824	87	My organization is very interested in the attitudes of the group members toward their jobs.
274	810	37	To what extent are your job performance goals specific?	306	824	88	My organization has a very strong interest in the welfare of its people.
275	811	46	To what extent does your work give you a feeling of pride?	307	824	89	I am very proud to work for this organization.
276	817	47	To what extent do you have the opportunity to learn skills which will improve your promotion potential?	308	824	90	I feel responsible to my organization in accomplishing its mission.
277	(Note)	48	To what extent do you have the necessary supplies to accomplish your job?	309	820	91	The information in my organization is widely shared so that those needing it have it available.
278	(Note)	49	To what extent do details (task not covered by primary or additional duty descriptions) interfere with the performance of your primary job?	310	824	92	Personnel in my unit are recognized for outstanding performance.
279	(Note)	50	To what extent does a bottleneck in your organization seriously affect the flow of work either to or from your group?	311	824	93	I am usually given the opportunity to show or demonstrate my work to others.
280 thru 299	-	-	(Not Used)	312	824	94	There is a high spirit of teamwork among my co-workers.
				313	824	95	There is outstanding cooperation between work groups of my organization.

Note: These variables are elements of "work interferences" (not a statistical factor).

Section 7 (Continued)

OAP VARIABLES

VARIABLE NUMBER	FACTOR	STATEMENT	STATEMENT NUMBER	VARIABLE NUMBER	FACTOR	STATEMENT NUMBER	STATEMENT
314	820	My organization has clear-cut goals.	96	413	818	63	My supervisor has made his responsibilities clear to the group.
315	824	I feel motivated to contribute my best efforts to the mission of my organization.	97	414	-	-	(Not Used)
316	824	My organization rewards individuals based on performance.	98	415	-	-	(Not Used)
317	820	The goals of my organization are reasonable.	99	416	818	65	My supervisor performs well under pressure.
318	820	My organization provides accurate information to my work group.	100	417	-	-	(Not Used)
319 thru 399	-	(Not Used)	-	418	-	-	(Not Used)
400	-	(Not Used)	-	419	-	-	(Not Used)
401	-	(Not Used)	-	420	-	-	(Not Used)
402	-	(Not Used)	-	421	-	-	(Not Used)
403	-	(Not Used)	-	422	-	-	(Not Used)
404	818	My supervisor is a good planner.	58	423	-	-	(Not Used)
405	818	My supervisor sets high performance standards.	59	424	(Note)	66	My supervisor takes time to help me when needed.
406	-	(Not Used)	-	425	-	-	(Not Used)
407	-	(Not Used)	-	426	819	67	My supervisor asks members for their ideas on task improvements.
408	-	(Not Used)	-	427	-	-	(Not Used)
409	-	(Not Used)	-	428	819	68	My supervisor explains how my job contributes to the overall mission.
410	818	My supervisor encourages teamwork.	60	429	-	-	(Not Used)
411	818	My supervisor represents the group at all times.	61	430	-	-	(Not Used)
412	818	My supervisor establishes good work procedures.	62	431	819	69	My supervisor helps me set specific goals.
				432	-	-	(Not Used)

Note: This variable is an element of "supervisory assistance" (not a statistical factor).

Section 7 (Continued)

OAP VARIABLES

VARIABLE NUMBER	FACTOR	STATEMENT NUMBER	STATEMENT	VARIABLE NUMBER	FACTOR	STATEMENT NUMBER	STATEMENT
433	819	70	My supervisor lets me know when I am doing a good job.	707	-	-	(Not Used)
434	(Note)	71	My supervisor lets me know when I am doing a poor job.	708	-	-	(Not Used)
435	819	72	My supervisor always helps me improve my performance.	709	822	102	Co-worker Relationships My amount of effort compared to the effort of my co-workers, the extent to which my co-workers share the load, and the spirit of teamwork which exists among my co-workers.
436	819	73	My supervisor insures that I get job related training when needed.				
437	819	74	My job performance has improved due to feedback received from my supervisor.	710	822	103	Family Attitude Toward Job The recognition and the pride my family has in the work I do.
438	-	-	(Not Used)	711	823	104	On-the-Job Training (OJT) The OJT instructional methods and instructors' competence.
439	(Note)	75	When I need technical advice, I usually go to my supervisor.	712	823	105	Technical Training (Other than OJT) The technical training I have received to perform my current job.
440	-	-	(Not Used)	713	-	-	(Not Used)
441	-	-	(Not Used)	714	-	-	(Not Used)
442	819	76	My supervisor frequently gives me feedback on how well I am doing my job.	715	-	-	(Not Used)
443	-	-	(Not Used)	716	-	-	(Not Used)
444	-	-	(Not Used)	717	822	106	Work Schedule My work schedule; flexibility and regularity of my work schedule; the number of hours I work per week.
445	818	64	My supervisor fully explains procedures to each group member.				Job Security
446 thru 699	-	-	(Not Used)	718	822	107	
700	-	-	(Not Used)	719	822	108	Acquired Valuable Skills The chance to acquire valuable skills in my job which prepares me for future opportunities.
701	-	-	(Not Used)				
702	-	-	(Not Used)	720	-	-	(Not Used)
703	-	-	(Not Used)	721	-	-	(Not Used)
704	-	-	(Not Used)	722	-	-	(Not Used)
705	822	101	Feeling of Helpfulness The chance to help people and improve their welfare through the performance of my job. The importance of my job performance to the welfare of others.	723	822	109	My Job as a Whole
			(Not Used)	724 thru 999	-	-	(Not Used)

Note: These variables are elements of "supervisory assistance" (not a statistical factor).

APPENDIX D

REVISED OAP FACTOR STRUCTURE AND
CORRESPONDING ITEMS ACROSS ALL
FUNCTIONAL AREA AND DEMOGRAPHIC
GROUPS

Table 1
Supervision - Factor Loading by Sample

	Total Data Base n = 44728	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
	12758	4827	8295	2117	2426	961	988	8261	
V404	.78017	.791	.784	.779	.751	.787	.768	.758	.781
V405	.69564	.700	.700	.687	.685	.726	.708	.658	.705
V410	.75274	.769	.754	.745	.743	.768	.731	.737	.746
V411	.76523	.775	.765	.771	.737	.771	.756	.780	.766
V412	.82057	.831	.825	.814	.805	.806	.829	.834	.817
V413	.76411	.775	.769	.754	.740	.747	.775	.784	.763
V416	.77464	.782	.786	.775	.757	.764	.791	.786	.779
V424	.78796	.801	.788	.779	.774	.782	.779	.783	.791
V426	.74421	.755	.757	.741	.723	.739	.739	.740	.750
V428	.75145	.762	.756	.730	.741	.741	.735	.746	.759
V431	.78784	.795	.786	.771	.766	.799	.788	.799	.786
V433	.75659	.766	.749	.743	.751	.763	.762	.779	.750
V434	.45201	.469	.447	.367	.507	.445	.428	.506	.484
V435	.83054	.843	.833	.812	.827	.822	.839	.840	.822
V436	.71745	.747	.728	.692	.721	.712	.768	.733	.686
V437	.77723	.779	.780	.757	.770	.780	.811	.781	.780
V439	.70060	.722	.715	.684	.670	.714	.670	.672	.697
V442	.75311	.755	.746	.730	.761	.764	.773	.756	.758
V445	.80228	.809	.811	.800	.767	.790	.818	.797	.800
V216	.36804	.360	(.364)	.362	.316	.415	.367	(.304)	.391
V711	(.34034)	(.348)	(.366)	(.316)	(.326)	.372	(.316)	(.326)	(.328)

Table 1 (Cont'd)

V A R I A B L E	Male		Female		Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
	37633	6856	6856	5345							
V404	.779	.791	.791	.760	.786	.780	.782	.774	.776	.780	.780
V405	.695	.704	.704	.668	.697	.716	.693	.692	.724	.707	.707
V410	.753	.756	.756	.732	.758	.746	.751	.760	.777	.747	.747
V411	.764	.775	.775	.725	.772	.764	.764	.751	.784	.784	.784
V412	.821	.824	.824	.792	.827	.816	.820	.815	.833	.825	.825
V413	.763	.771	.771	.753	.764	.768	.764	.757	.786	.768	.768
V416	.777	.769	.769	.756	.785	.772	.773	.779	.781	.787	.787
V424	.788	.794	.794	.781	.788	.798	.786	.788	.804	.798	.798
V426	.743	.751	.751	.727	.746	.758	.742	.731	.766	.771	.771
V428	.751	.755	.755	.722	.750	.767	.747	.759	.779	.774	.774
V431	.786	.795	.795	.743	.790	.794	.786	.786	.797	.804	.804
V433	.758	.747	.747	.720	.760	.752	.755	.755	.760	.772	.772
V434	.449	.457	.457	.445	.432	.509	.446	.455	.516	.436	.436
V435	.831	.826	.826	.799	.833	.822	.832	.816	.833	.836	.836
V436	.720	.702	.702	.663	.732	.677	.711	.731	.749	.737	.737
V437	.777	.780	.780	.759	.778	.767	.781	.748	.793	.776	.776
V439	.694	.741	.741	.622	.712	.706	.697	.697	.737	.727	.727
V442	.755	.740	.740	.733	.750	.750	.753	.733	.766	.767	.767
V445	.802	.805	.805	.774	.806	.799	.802	.798	.822	.806	.806
V216	.363	.400	.400	(.323)	.369	.395	.367	.361	.347	(.398)	(.398)
V711	.334	.377	.377	(.277)	(.331)	(.384)	(.344)	(.327)	(.326)	(.337)	(.337)

Table 2
Organizational Climate - Factor Loading by Sample

	Total Data Base E n = 44728	Wing/ Group 12758	Resources 4827	Maintenance 8295	Opera- tions 2117	Medical 2426	Missile 961	Communi- cations 988	Unique 8261
V									
A									
R									
I									
A									
B									
L									
E									
V300	.61924	.626	.614	.604	.615	.619	.584	.573	.624
V301	.70623	.724	.696	.693	.655	.720	.727	.684	.713
V302	.75476	.755	.746	.750	.721	.775	.779	.759	.769
V303	.69232	.695	.691	.694	.657	.681	.708	.715	.691
V304	.66838	.678	.671	.660	.656	.680	.640	.654	.670
V305	.75204	.747	.656	.739	.730	.759	.737	.766	.764
V306	.76560	.762	.768	.752	.749	.786	.744	.780	.778
V307	.65923	.650	.691	.632	.646	.687	.648	.727	.671
V308	.47813	.493	.514	.438	.462	.500	.501	.514	.471
V309	.76025	.759	.766	.756	.741	.760	.743	.785	.769
V310	.67601	.678	.687	.653	.718	.654	.652	.711	.690
V311	.53229	.541	.550	.493	.567	.511	.506	.568	.546
V313	.63885	.645	.660	.595	.628	.642	.605	.656	.649
V314	.65700	.680	.671	.637	.616	.626	.570	.673	.655
V315	.55333	.570	.596	.527	.541	.557	(.494)	.582	.540
V316	.69576	.703	.720	.670	.713	.668	.695	.710	.701
V317	.64107	.655	.672	.628	.589	.640	.585	.637	.634
V318	.77490	.777	.772	.769	.758	.773	.766	.785	.789
V711	.35698	.383	.403	(.312)	(.335)	(.339)	(.308)	(.377)	(.345)
V241	(.42689)	(.430)	.447	(.386)	(.454)	(.364)	.456	.412	.455
V312	(.44215)	(.440)	.494	(.380)	.535	(.458)	(.434)	.459	(.448)
V712	(.31183)	(.352)	(.343)	(.285)	(.297)	(.301)	(.246)	(.267)	(.276)

Table 2 (Cont'd)

V A R I A B L E	Male 37633	Female 6856	Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
V300	.622	.613	.606	.613	.625	.624	.553	.605	.658
V301	.708	.711	.689	.707	.703	.707	.694	.718	.707
V302	.756	.764	.737	.754	.743	.760	.724	.759	.740
V303	.691	.709	.684	.686	.697	.696	.662	.683	.701
V304	.671	.649	.667	.667	.653	.670	.643	.670	.687
V305	.753	.743	.737	.753	.744	.751	.747	.754	.763
V306	.765	.763	.737	.770	.751	.764	.766	.769	.776
V307	.663	.636	.611	.673	.613	.655	.687	.665	.681
V308	.488	(.414)	.428	.501	.378	.474	.512	.481	.491
V309	.759	.766	.751	.763	.740	.764	.738	.757	.764
V310	.678	.637	.678	.680	.656	.674	.666	.677	.704
V311	.538	.483	.551	.516	.545	.534	.512	.554	.533
V313	.636	.639	.632	.631	.649	.636	.646	.643	.656
V314	.654	.667	.601	.658	.663	.651	.674	.694	.675
V315	.560	(.503)	.497	.569	.495	.546	.596	.582	.557
V316	.697	.664	.690	.697	.679	.692	.691	.720	.720
V317	.640	.641	.585	.650	.626	.636	.658	.648	.675
V318	.775	.781	.764	.775	.762	.779	.754	.772	.772
V711	(.360)	(.337)	.380	.343	.415	.353	.361	.370	.395
V241	(.427)	.401	.455	.415	.443	(.427)	.399	.436	(.444)
V312	(.441)	(.429)	.523	.414	.479	(.436)	.458	.488	.457
V712	(.316)	(.292)	.329	.292	.373	(.304)	.313	.379	(.355)

Table 3
Work Group Effectiveness - Factor Loading by Sample

	Total Data Base n = 44728	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
		12758	4827	8295	2117	2426	961	988	8261
V238	.55508	.547	.530	.552	.535	.567	.549	.424	.567
V259	.66257	.696	.676	.661	.591	.612	.557	.662	.642
V260	.75659	.774	.774	.744	.716	.747	.754	.762	.736
V261	.73389	.727	.737	.723	.755	.696	.760	.767	.749
V264	.67856	.667	.669	.654	.707	.686	.632	.697	.707
V265	.74094	.742	.756	.729	.737	.730	.735	.741	.737
V312	.49240	.492	(.450)	.526	(.436)	.478	.494	(.459)	.501
V709	.53934	.531	.527	.545	.476	.560	.457	.471	.557

Table 3 (Cont'd)

V A R I A B L E	Male		Female		Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
	37633	6856									
V238	.549	.583			.567	.552	.572	.572	.479	.489	.530
V259	.660	.690			.625	.649	.722	.654	.696	.704	.661
V260	.753	.780			.753	.747	.795	.756	.765	.766	.742
V261	.730	.751			.774	.724	.760	.737	.717	.737	.730
V264	.683	.662			.740	.662	.707	.683	.660	.686	.654
V265	.738	.754			.763	.732	.766	.745	.720	.735	.740
V312	.493	.483			.480	.499	(.478)	.505	(.424)	(.447)	.481
V709	.536	.551			.540	.541	.541	.553	.487	.477	.508

Table 4
Task Characteristics - Factor Loading by Sample

V A R I A B L E	n	Total Data Base	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
E	44728	12758	4827	8295	2117	2426	961	988	8261	
V201		.68233	.669	.638	.653	(.390)	.661	.629	.709	.711
V202		.66402	.642	.627	.643	.506	.661	.647	.667	.671
V203		.71318	.733	.714	.680	.695	.711	.717	(.320)	.708
V209		.44652	(.407)	.392	.458	(.345)	.398	.417	(.254)	.479
V210		.65226	.684	.663	.617	.714	.595	.701	(.236)	.660
V211		.40121	.389	.341	.404	(.370)	.429	.441	(.208)	.386
V212		.66876	.647	.612	.655	(.276)	.684	.589	.658	.700
V215		(.43882)	(.396)	(.392)	(.413)	(.241)	(.357)	(.420)	(.198)	.535
V218		(.29771)	(.274)	(.294)	(.253)	(.086)	(.250)	(.077)	(.394)	.355
V275		(.41124)	(.376)	(.348)	(.381)	(.237)	(.146)	(.345)	(.140)	.520

Table 4 (Cont'd)

V A R I A B L E	Male		Female		Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
	37633	6856	6856	37633							
V201	.687	.644	.644	.687	.734	.691	.677	.679	.693	.674	.691
V202	.668	.645	.645	.668	.625	.673	.654	.655	.692	.695	.687
V203	.705	.759	.759	.705	.693	.691	.733	.712	.703	.727	.712
V209	.460	.404	.404	.460	.455	.452	(.384)	.441	.463	.414	.442
V210	.649	.700	.700	.649	.610	.636	.642	.651	.641	.687	.661
V211	.418	.335	.335	.418	.425	.399	.323	.404	.371	.393	.381
V212	.670	.648	.648	.670	.774	.672	.685	.669	.655	.663	.688
V215	(.448)	(.413)	(.413)	(.448)	.534	(.426)	(.402)	(.449)	(.396)	(.411)	(.406)
V218	(.296)	(.267)	(.267)	(.296)	(.311)	(.316)	(.283)	(.305)	(.262)	(.298)	(.281)
V275	(.420)	(.396)	(.396)	(.420)	.502	(.399)	(.376)	(.418)	(.399)	(.386)	(.371)

Table 5
Pride & Satisfaction - Factor Loading by Sample

	Total Data Base n = 44728	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
		12758	4827	8295	2117	2426	961	988	8261
V									
A									
R									
I									
A									
B									
L									
E									
V215	.52967	.544	.539	.464	.679	.607	.557	.527	(.437)
V275	.50868	.511	.529	.447	.636	.597	.546	.531	(.460)
V705	.46812	.451	.458	.436	.487	.498	.478	.494	.446
V710	.59168	.594	.583	.571	.550	.592	.576	.527	.597
V712	.40328	.393	(.306)	.552	(.318)	(.296)	(.244)	.579	.440
V717	.42520	.444	.467	.449	(.175)	(.283)	(.290)	(.254)	.407
V718	.50832	.507	.548	.539	(.252)	.431	.478	.475	.527
V719	.50415	.516	.465	.538	.457	.496	.321	.557	.495
V723	.62616	.632	.618	.588	.562	.687	.606	.646	.605
V711	(.33921)	(.340)	(.248)	.460	(.247)	(.263)	(.239)	.407	.362
V308	(.38709)	(.404)	(.411)	(.307)	.502	(.436)	(.475)	(.262)	(.316)
V315	(.41533)	(.412)	(.416)	(.342)	(.522)	(.484)	.528	(.338)	(.385)

Table 5 (Cont'd)

VARIABLE	Male		Female		Officer 5345	Enlisted 30508	Civilian 8257	White		Black 4863	Hispanic		Other 3138
	37633	6856						34333	4863		2128	3138	
V215	.513	.566			(.520)	.528	.542	.531	.488		.564	.538	
V275	.492	.551			(.500)	.508	.517	.516	.443		.545	.491	
V705	.456	.495			.439	.480	.458	.470	.422		.453	.489	
V710	.593	.547			.530	.595	.570	.584	.593		.629	.614	
V712	.433	(.304)			(.203)	.483	(.206)	.387	.506		(.313)	.422	
V717	.425	.420			(.283)	.390	.421	.419	.470		.379	.419	
V718	.512	.494			(.348)	.515	.403	.490	.575		.518	.515	
V719	.515	.445			(.386)	.558	(.311)	.495	.563		.452	.747	
V723	.619	.639			.583	.636	.563	.621	.625		.657	.610	
V308	(.352)	.532			.442	(.324)	.521	(.387)	(.305)		.497	(.385)	
V711	.364	(.251)			(.183)	.394	(.198)	(.333)	.364		(.295)	(.349)	
V315	(.388)	.519			(.481)	(.243)	(.478)	(.424)	(.313)		(.448)	(.421)	

Table 6
Need for Enrichment - Factor Loading by Sample

V A R I A B L E	Total Data Base n = 44728	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
		12758	4827	8295	2117	2426	961	988	8261
V249	.70126	.715	.717	.695	.688	.709	.675	.677	.660
V250	.85123	.849	.852	.855	.839	.849	.817	.850	.845
V251	.86769	.869	.865	.871	.864	.863	.857	.863	.866
V252	.87911	.879	.879	.876	.853	.878	.878	.856	.882
V253	.77989	.796	.785	.773	.727	.768	.770	.754	.764

Table 6 (Cont'd)

V A R I A B L E	Gender		Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
	Male 37633	Female 6856							
V249	.704	.678	.616	.700	.711	.701	.667	.708	.727
V250	.850	.858	.841	.852	.849	.851	.848	.846	.851
V251	.866	.875	.866	.873	.844	.868	.865	.855	.876
V252	.878	.888	.864	.878	.884	.879	.877	.874	.875
V253	.779	.767	.700	.781	.786	.778	.764	.813	.779

Table 7
Task Autonomy - Factor Loading by Sample

	Total Data Base n = 44728	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
V A R I A B L E		12758	4827	8295	2117	2426	961	988	8261
V213	.76466	.741	.776	.798	.771	.717	.814	.713	.773
V214	.61629	.617	.629	.607	.614	.620	.562	.438	.666
V270	.73423	.720	.698	.709	.698	.725	.685	.732	.762
V271	.79860	.780	.807	.810	.792	.792	.826	.805	.780
V272	.42343	.519	.451	.348	(.376)	.400	(.341)	(.275)	.393
V209	(.35533)	.428	(.387)	(.251)	(.356)	(.342)	(.309)	(.255)	(.353)

Table 7 (Cont'd)

V A R I A B L E	Male 37633	Female 6856	Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
V213	.763	.772	.768	.765	.781	.767	.752	.763	.756
V214	.611	.651	.586	.605	.672	.621	.596	.605	.617
V270	.732	.749	.740	.728	.735	.734	.724	.717	.738
V271	.796	.816	.798	.800	.814	.798	.795	.805	.790
V272	.415	.451	(.315)	.418	.459	.422	.408	.439	.481
V209	(.341)	(.403)	(.339)	(.338)	.438	(.360)	(.335)	(.362)	(.366)

Table 8
Goals - Factor Loading by Sample

	Total Data Base n = 44728	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
		12758	4827	8295	2117	2426	961	988	8261
V217	.64837	.640	.642	.614	.648	.634	.691	.695	.625
V221	.61002	.568	.644	.620	.545	.630	.639	.687	.606
V273	.78469	.760	.799	.786	.768	.797	.815	.795	.773
V274	.78970	.770	.804	.782	.766	.797	.809	.796	.771
V272	(.28414)	(.251)	(.267)	(.317)	.415	(.312)	.404	(.282)	(.238)
V209	(.29479)	(.269)	(.284)	(.332)	.312	(.344)	(.347)	(.329)	(.244)
V211	(.24404)	(.201)	(.260)	(.260)	.382	(.284)	(.255)	.394	(.263)

Table 8 (Cont'd)

V A R I A B L E	Male		Female		Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
	37633	6856	6856	6856							
V217	.646	.654	.654	.654	.629	.636	.659	.651	.643	.603	.627
V221	.603	.648	.648	.648	.596	.592	.662	.613	.606	.621	.583
V273	.780	.809	.809	.809	.775	.779	.784	.790	.762	.758	.763
V274	.787	.804	.804	.804	.785	.781	.777	.794	.768	.771	.767
V272	(.280)	(.293)	(.293)	(.293)	.380	(.267)	(.287)	(.291)	(.262)	(.275)	(.264)
V209	(.289)	(.313)	(.313)	(.313)	(.339)	(.289)	(.290)	(.305)	(.274)	(.290)	(.266)
V211	(.245)	(.229)	(.229)	(.229)	(.301)	(.267)	(.225)	(.251)	(.266)	(.133)	(.238)

Table 9

Advancement/Recognition - Factor Loading by Sample

	Total Data Base n = 44728	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
	12758	4827	8295	2117	2426	961	988	8261	
V234	.61514	.628	.632	.662	.476	.602	.511	.565	.634
V239	.74110	.750	.772	.726	.697	.693	.673	.769	.752
V240	.56232	.562	.576	.563	.609	.581	.560	.578	.533
V241	.45796	.468	(.437)	.418	.471	.440	(.414)	(.395)	(.435)
V276	.60003	.613	.634	.551	.592	.625	.543	.628	.597
V712	(.21625)	(.214)	(.246)	(.152)	(.125)	.336	(.198)	(.108)	(.248)
V718	(.11210)	(.128)	(.102)	(.108)	(.303)	(.206)	(.029)	(.102)	(.124)
V719	(.29402)	(.288)	(.332)	(.244)	(.361)	(.312)	(.256)	(.269)	(.328)

Table 9 (Cont'd)

V A R I A B L E									
	Male 37633	Female 6856	Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
V234	.605	.626	.488	.589	.540	.608	.619	.662	.613
V239	.731	.792	.730	.663	.723	.746	.679	.733	.731
V240	.562	.594	.628	.487	.598	.572	.520	.514	.533
V241	.461	(.366)	(.412)	.468	.457	.451	.460	.494	.467
V276	.581	.687	.652	.527	.697	.603	.537	.598	.621
V719	(.268)	(.417)	.414	(.202)	.502	(.300)	(.242)	(.270)	(.312)
V718	(.115)	(.159)	.367	(.080)	(.177)	(.120)	(.083)	(.071)	(.123)
V712	(.190)	(.254)	(.139)	(.183)	(.065)	(.208)	(.245)	(.205)	(.219)

Table 10
Work Support - Factor Loading by Sample

V A R I A B L E	n	Total Data Base	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
E	44728	12758	4827	8295	2117	2426	961	988	8261	
V207		.79611	.795	.793	.776	.784	.817	.793	.828	.798
V208		.63972	.637	.646	.625	.680	.714	.503	.530	.624
V277		.76205	.768	.750	.744	.772	.793	.741	.746	.772

Table 10 (Cont'd)

V A R I A B L E	Female 6056		Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
	Male 37633								
V207	.794	.813	.735	.800	.777	.800	.777	.756	.790
V208	.633	.694	.685	.627	.651	.639	.616	.658	.639
V277	.760	.782	.802	.759	.761	.771	.721	.733	.738

Table 11
Work Interference - Factor Loading by Sample

VARIABLE	Total Data Base n = 44728	Wing/ Group	Resources	Maintenance	Operations	Medical	Missile	Communications	Unique
E	12758	4827	8295	2117	2426	961	988	8261	
V206	.80231	.788	.797	.802	.772	.776	.737	.696	.808
V218	.34275	.413	(.366)	.313	(.135)	.432	(.133)	.407	(.261)
V278	.81962	.801	.827	.826	.776	.789	.815	.822	.823
V279	.43561	.486	.436	.380	.481	.438	.463	.476	.434

Table 11 (Cont'd)

V A R I A B L E	Male 37633	Female 6856	Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
V206	.802	.804	.833	.796	.794	.806	.778	.811	.779
V218	.341	(.351)	(.219)	.340	.383	.348	(.328)	(.287)	(.300)
V278	.821	.807	.829	.821	.815	.821	.814	.817	.803
V279	.427	.459	(.329)	.444	.448	.422	.494	.449	.440

Table 12
Work Repetition - Factor Loading by Sample

Work Repetition - Factor Loading by Sample										
		Total Data Base n =	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
V A R I A B L E										
		44728	12758	4827	8295	2117	2426	961	988	8261
V226		.77661	.798	.766	.796	.731	.767	.807	.787	.740
V227		.77063	.803	.743	.792	.767	.700	.852	.834	.737

Table 12 (Cont'd)

V A R I A B L E									
	Male 37633	Female 6856	Officer 5345	Enlisted 30508	Civilian 8257	White 34333	Black 4863	Hispanic 2128	Other 3138
V226	.776	.793	.808	.798	.755	.772	.794	.807	.773
V227	.779	.777	.827	.787	.769	.767	.794	.761	.756

Table 13

Desired Repetitive Easy Tasks - Factor Loading by Sample

V A R I A B L E	Total Data Base n = 44728	Wing/ Group	Resources	Maintenance	Opera- tions	Medical	Missile	Communi- cations	Unique
		12758	4827	8295	2117	2426	961	988	8261
V255	.81127	.837	.809	.812	.683	.781	.724	.782	.773
V258	.82346	.831	.808	.830	.712	.800	.795	.826	.803

Table 13 (Cont'd)

V A R I A B L E	Male	Female	Officer	Enlisted	Civilian	White	Black	Hispanic	Other
	37633	6856	5345	30508	8257	34333	4863	2128	3138
V255	.807	.844	.779	.812	.822	.803	.825	.830	.811
V258	.824	.836	.818	.825	.824	.820	.811	.830	.818

APPENDIX E

RESULTS OF FACTOR COMPARISON STUDIES

NOTE: For names of factors associated with
Factor numbers, refer to Table 4,
page 13 in text.

TABLE 1

COMPARISON OF FACTOR STRUCTURES FOR
WING/GROUP
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT WING/GROUP

WING/GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.60	.50	.31	.46	.12	.32	.40	.45	.28	-.16	-.11	.05
2	.60	.99	.55	.40	.65	.16	.44	.44	.49	.41	-.26	-.20	.03
3	.50	.55	.99	.43	.49	.22	.34	.40	.36	.29	-.11	-.10	.00
4	.33	.41	.43	.99	.56	.35	.47	.47	.42	.25	.04	-.11	-.02
5	.36	.47	.37	.56	.99	.30	.97	.43	.37	.34	-.16	-.21	-.04
6	.45	.63	.49	.56	.99	.24	.46	.44	.48	.30	-.16	-.24	.01
7	.14	.17	.23	.36	.25	.99	.29	.24	.21	.17	.01	-.02	-.25
8	.40	.44	.39	.49	.45	.24	.34	.99	.38	.38	-.16	.06	.06
9	.45	.49	.37	.43	.49	.20	.36	.39	.99	.27	-.06	-.10	.01
10	.30	.41	.30	.25	.32	.17	.30	.39	.29	.99	-.24	-.02	.03
11	-.16	-.27	-.11	.10	-.18	.04	-.13	-.19	-.03	-.24	.98	.11	.03
12	-.13	-.22	-.11	-.14	-.24	-.02	-.26	.06	-.11	-.03	.10	.97	.17
13	.06	.05	.02	.01	.04	-.27	-.01	.06	.06	.00	.03	.15	.97
14	-.02	-.01	.02	.14	-.02	.11	.10	-.07	-.02	-.10	.08	-.08	-.09

TABLE 2

COMPARISON OF FACTOR STRUCTURES FOR
WING/GROUP
USING S-INDICES

FACTORS FOR DATABASE EXCEPT WING/GROUP

WING/GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.97	.95	.75	.47	.66	.11	.42	.54	.62	.37	-.07	-.04	-.03
2	.92	.97	.75	.51	.69	.16	.50	.52	.60	.35	-.13	-.12	-.04
3	.81	.81	.87	.57	.60	.19	.46	.65	.52	.38	-.06	-.03	.00
4	.51	.52	.56	.95	.49	.40	.45	.51	.45	.17	.08	-.14	-.04
5	.61	.64	.52	.52	.57	.23	.78	.42	.59	.28	-.10	-.18	-.08
6	.68	.68	.53	.53	.90	.23	.55	.42	.72	.25	-.04	-.19	-.04
7	.21	.22	.22	.57	.29	.81	.45	.32	.28	.20	.06	-.24	-.29
8	.50	.51	.52	.52	.42	.22	.32	.85	.36	.48	-.14	.08	.05
9	.60	.57	.45	.44	.67	.12	.44	.43	.91	.23	-.04	-.15	-.05
10	.36	.35	.30	.22	.19	.06	.29	.42	.30	.78	-.28	.00	.00
11	-.07	-.16	.00	.12	-.07	.15	-.10	-.13	.04	-.27	.96	.00	.00
12	-.09	-.12	-.09	-.18	-.22	-.36	-.37	.08	-.22	.00	.07	.92	.17
13	-.03	-.02	.00	-.05	.00	-.38	-.05	.00	-.05	.00	.00	.08	.83
14	.02	.04	.08	.17	.00	.22	.15	-.04	.00	-.20	.06	-.10	.00

TABLE 3

COMPARISON OF FACTOR STRUCTURES FOR
WING/GROUP
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT WING/GROUP

WING/GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.01	.33	.33	.38	.34	.41	.37	.35	.34	.37	.43	.42	.40
2	.33	.03	.30	.33	.27	.38	.32	.32	.31	.32	.41	.41	.37
3	.33	.29	.02	.23	.21	.26	.24	.22	.23	.23	.28	.27	.26
4	.37	.32	.23	.03	.19	.24	.21	.21	.21	.23	.25	.27	.25
5	.36	.31	.24	.20	.20	.24	.05	.21	.21	.21	.27	.27	.25
6	.34	.27	.21	.20	.02	.25	.21	.21	.19	.22	.27	.27	.24
7	.40	.37	.26	.23	.25	.02	.24	.24	.24	.23	.25	.25	.26
8	.35	.31	.22	.20	.20	.23	.21	.03	.19	.18	.24	.22	.21
9	.34	.30	.22	.21	.19	.24	.21	.20	.02	.20	.23	.23	.21
10	.36	.31	.22	.23	.21	.23	.20	.19	.19	.02	.23	.21	.19
11	.42	.41	.27	.25	.27	.24	.25	.25	.23	.23	.02	.19	.19
12	.42	.40	.27	.27	.27	.24	.26	.22	.23	.21	.19	.03	.17
13	.39	.36	.25	.25	.24	.27	.23	.22	.21	.20	.19	.17	.03
14	.39	.36	.24	.23	.23	.22	.21	.22	.20	.20	.17	.18	.18

TABLE 4

COMPARISON OF FACTOR STRUCTURES FOR
RESOURCES
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT RESOURCES

RESOURCES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.61	.50	.31	.47	.12	.32	.40	.44	.29	-.17	-.12	.06
2	.61	.99	.57	.40	.66	.17	.44	.43	.50	.40	-.26	-.21	.03
3	.49	.53	.99	.41	.46	.21	.31	.38	.34	.28	-.11	-.10	.01
4	.12	.17	.21	.36	.24	.99	.29	.23	.21	.19	.02	-.02	-.27
5	.46	.62	.49	.56	.99	.25	.48	.43	.47	.32	-.19	-.23	.00
6	.28	.35	.39	.99	.50	.34	.44	.46	.39	.23	.08	-.08	-.01
7	.33	.43	.34	.53	.46	.30	.98	.40	.39	.31	-.12	-.25	-.02
8	.40	.42	.39	.48	.43	.23	.35	.99	.37	.38	-.17	.07	.05
9	.45	.49	.37	.43	.51	.21	.36	.38	.99	.27	-.05	-.14	.04
10	.29	.41	.30	.25	.32	.19	.33	.37	.26	.98	-.27	-.05	.00
11	-.16	-.27	-.12	.06	-.18	.02	-.14	-.19	-.04	-.26	.99	.12	.02
12	.14	.23	.12	.16	.27	.03	.22	-.05	.15	.03	-.10	-.98	-.17
13	.05	.03	.00	-.01	.02	-.27	-.03	.03	.03	-.01	.05	.17	.98
14	.00	-.03	.05	.12	-.06	.13	.04	-.05	.02	-.04	.12	-.08	-.05

TABLE 5

COMPARISON OF FACTOR STRUCTURES FOR
RESOURCES
USING S-INDICES

FACTORS FOR DATABASE EXCEPT RESOURCES

RESOURCES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.97	.92	.76	.46	.64	.11	.44	.52	.64	.36	-.05	-.02	.00
2	.95	.97	.75	.50	.68	.18	.52	.47	.62	.36	-.11	-.14	-.02
3	.78	.75	.87	.52	.48	.12	.31	.55	.44	.29	-.06	.00	.00
4	.19	.22	.22	.45	.25	.76	.40	.33	.29	.21	.13	-.21	-.32
5	.67	.68	.52	.51	.90	.23	.61	.44	.67	.32	-.07	-.23	.00
6	.43	.46	.49	.90	.54	.48	.53	.54	.46	.16	.09	-.12	.00
7	.49	.55	.44	.48	.51	.33	.83	.34	.58	.33	-.12	-.25	-.05
8	.50	.51	.57	.53	.38	.24	.29	.91	.40	.46	-.09	.12	.05
9	.62	.62	.49	.48	.68	.19	.56	.45	.90	.22	.00	-.18	.00
10	.43	.42	.38	.17	.27	.00	.29	.40	.25	.87	-.30	-.10	.00
11	-.07	-.13	-.03	.08	-.04	.14	-.09	-.09	.04	-.21	.96	.07	.00
12	.17	.16	.11	.18	.25	.33	.26	-.08	.29	.05	.06	-.81	-.17
13	.00	.00	.00	-.04	.00	-.32	-.09	.00	.00	-.08	.10	.15	.77
14	.00	.00	.11	.13	.03	.25	.14	-.11	.03	-.10	.11	-.10	.00

TABLE 6

COMPARISON OF FACTOR STRUCTURES FOR
RESOURCES
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT RESOURCES

RESOURCES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.02	.32	.33	.38	.34	.41	.37	.35	.34	.37	.43	.42	.40
2	.32	.03	.29	.33	.27	.38	.32	.32	.31	.33	.42	.41	.38
3	.33	.29	.02	.23	.22	.26	.24	.22	.22	.22	.27	.27	.25
4	.41	.37	.26	.24	.25	.02	.24	.24	.24	.23	.25	.25	.27
5	.34	.27	.21	.20	.03	.25	.20	.20	.19	.21	.27	.27	.24
6	.37	.33	.23	.03	.20	.23	.21	.20	.20	.22	.23	.25	.24
7	.36	.31	.24	.20	.21	.24	.03	.21	.20	.21	.26	.27	.24
8	.35	.32	.22	.20	.21	.24	.21	.02	.20	.19	.25	.22	.22
9	.34	.30	.22	.21	.19	.24	.21	.20	.02	.20	.23	.24	.21
10	.36	.32	.23	.23	.21	.23	.20	.19	.20	.02	.24	.21	.20
11	.43	.41	.28	.25	.27	.24	.26	.25	.23	.23	.02	.19	.19
12	.38	.34	.24	.24	.21	.24	.21	.23	.20	.20	.21	.28	.20
13	.39	.37	.25	.25	.24	.27	.24	.22	.21	.20	.19	.17	.03
14	.39	.37	.24	.23	.24	.22	.22	.22	.20	.19	.17	.18	.17

TABLE 7

COMPARISON OF FACTOR STRUCTURES FOR
MAINTENANCE
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT MAINTENANCE

MAINTENANCE	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.60	.49	.32	.13	.45	.33	.39	.44	.28	-.16	-.13	.06
2	.59	.99	.52	.38	.15	.62	.43	.42	.49	.40	-.27	-.20	.04
3	.51	.55	.99	.42	.21	.48	.33	.39	.37	.28	-.11	-.11	.02
4	.31	.37	.39	.99	.34	.53	.47	.47	.41	.24	.06	-.10	-.01
5	.48	.65	.48	.52	.99	.22	.98	.45	.44	.51	.32	-.19	-.26
6	.13	.16	.21	.34	.22	.99	.24	.27	.24	.21	.16	.02	-.01
7	.31	.42	.31	.45	.26	.43	.98	.32	.37	.27	-.11	-.26	.00
8	.41	.44	.40	.50	.25	.44	.40	.99	.40	.39	-.18	.05	.04
9	.42	.47	.34	.42	.22	.44	.35	.37	.98	.27	-.03	-.12	.04
10	.27	.40	.28	.21	.15	.29	.31	.38	.26	.98	-.28	-.02	.01
11	-.14	-.24	-.12	-.17	.03	-.28	-.23	.01	-.13	-.06	.13	.96	.16
12	-.15	-.26	-.12	.05	.01	-.19	-.16	-.18	-.07	-.23	.99	.10	.03
13	.08	.07	.02	.03	-.26	.05	.00	.06	.06	.02	.05	.16	.96
14	.14	.25	.21	.34	.18	.44	.17	.17	.16	.05	.01	-.06	-.09
15	.21	.21	.12	.13	.01	.24	.21	.11	.30	-.03	-.05	.08	-.12

TABLE 8

COMPARISON OF FACTOR STRUCTURES FOR
MAINTENANCE
USING S-INDICES

FACTORS FOR DATABASE EXCEPT MAINTENANCE

MAINTENANCE	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.98	.92	.76	.49	.18	.64	.49	.52	.63	.36	-.05	-.09	.00
2	.93	.96	.74	.46	.17	.64	.49	.52	.61	.36	-.16	-.15	.00
3	.74	.72	.86	.52	.16	.51	.40	.47	.49	.19	.00	-.09	.00
4	.47	.49	.56	.92	.41	.53	.51	.51	.47	.19	.08	-.07	.00
5	.65	.67	.56	.44	.23	.82	.49	.41	.61	.30	-.11	-.29	.00
6	.16	.20	.20	.44	.80	.25	.31	.27	.30	.11	.14	-.16	-.36
7	.37	.44	.38	.47	.41	.48	.79	.36	.48	.23	-.11	-.30	.00
8	.54	.51	.58	.54	.24	.39	.36	.81	.41	.44	-.09	.08	.00
9	.49	.48	.37	.49	.22	.57	.48	.39	.83	.22	.05	-.26	.00
10	.31	.34	.36	.18	.11	.28	.26	.49	.19	.78	-.27	.00	.00
11	-.07	-.14	-.08	-.11	-.29	-.21	-.23	.08	-.26	.00	.00	.86	.18
12	-.05	-.11	-.03	.08	.14	.00	-.09	-.09	.04	-.21	.96	.06	.00
13	-.03	-.05	.00	-.05	-.33	.00	-.05	.00	-.05	.00	.00	.08	.91
14	.14	.17	.20	.31	.13	.36	.19	.13	.13	-.09	.05	-.09	.00
15	.16	.13	-.05	.12	-.04	.23	.16	.06	.37	-.04	-.15	.08	.00

LEADERSHIP AND MANAGEMENT DEVELOPMENT CENTER MAXWELL--ETC F/G 5/1
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TABLE 9

COMPARISON OF FACTOR STRUCTURES FOR
MAINTENANCE
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT MAINTENANCE

MAINTENANCE	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.02	.32	.32	.37	.40	.33	.36	.34	.33	.36	.42	.41	.39
2	.32	.03	.29	.32	.36	.26	.31	.31	.29	.31	.40	.39	.35
3	.33	.29	.02	.23	.26	.21	.24	.22	.22	.23	.27	.27	.25
4	.37	.33	.23	.03	.23	.19	.21	.20	.21	.22	.24	.26	.24
5	.33	.27	.22	.21	.25	.04	.21	.20	.19	.21	.27	.27	.23
6	.41	.37	.26	.24	.02	.25	.24	.24	.23	.23	.24	.24	.27
7	.37	.32	.24	.21	.24	.21	.04	.21	.20	.21	.25	.26	.23
8	.35	.31	.22	.20	.23	.20	.21	.02	.19	.19	.25	.22	.22
9	.34	.31	.22	.21	.23	.19	.21	.19	.03	.19	.22	.23	.20
10	.37	.32	.23	.24	.23	.21	.21	.19	.20	.03	.23	.21	.20
11	.42	.41	.27	.28	.25	.27	.27	.23	.24	.21	.19	.04	.17
12	.42	.41	.27	.25	.24	.26	.26	.25	.23	.23	.02	.19	.19
13	.39	.36	.25	.25	.26	.23	.23	.21	.21	.20	.19	.17	.03
14	.38	.34	.23	.21	.22	.18	.21	.20	.20	.19	.19	.19	.19
15	.37	.34	.23	.23	.23	.20	.20	.20	.18	.19	.19	.17	.18

TABLE 10

COMPARISON OF FACTOR STRUCTURES FOR
OPERATIONS
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT OPERATIONS

OPERATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.60	.51	.32	.47	.14	.32	.41	.44	.28	-.16	-.11	.06
2	.59	.99	.55	.40	.63	.17	.45	.43	.51	.40	-.27	-.20	.02
3	.45	.62	.50	.67	.95	.28	.45	.46	.49	.27	-.10	-.26	.02
4	.49	.53	.99	.42	.46	.22	.30	.40	.34	.29	-.12	-.07	.01
5	.16	.19	.24	.35	.26	.98	.25	.26	.23	.18	.04	-.03	-.28
6	.42	.47	.43	.52	.44	.24	.40	.97	.42	.41	-.19	.09	.05
7	.31	.43	.31	.47	.46	.24	.98	.32	.38	.29	-.17	-.24	.02
8	.45	.51	.36	.47	.57	.22	.40	.40	.95	.28	-.07	-.15	.06
9	.25	.31	.33	.90	.43	.25	.37	.41	.33	.25	.02	.07	.00
10	.29	.42	.31	.29	.35	.18	.30	.39	.30	.96	-.26	-.06	-.01
11	-.01	-.02	.09	.52	-.06	.17	.01	.00	.12	-.13	.39	-.24	.00
12	-.18	-.30	-.14	.05	-.17	.01	-.19	-.17	-.07	-.29	.94	.17	.03
13	.04	.02	-.01	-.04	.00	-.23	-.06	.12	-.04	.06	.04	.30	.85
14	-.07	-.16	-.04	-.05	-.16	-.01	-.15	.05	-.03	-.04	.11	.88	.26
15	.18	.24	.19	.16	.33	.00	.09	.16	.20	.17	-.08	-.21	.15

TABLE 11

COMPARISON OF FACTOR STRUCTURES FOR
OPERATIONS
USING S-INDICES

FACTORS FOR DATABASE EXCEPT OPERATIONS

OPERATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.98	.93	.78	.48	.67	.09	.48	.53	.65	.34	-.07	-.04	.00
2	.93	.97	.77	.50	.71	.15	.55	.51	.60	.33	-.13	-.10	.00
3	.69	.66	.65	.66	.82	.28	.57	.51	.69	.22	.00	-.18	-.04
4	.70	.67	.88	.45	.42	.10	.33	.57	.30	.27	-.04	.03	.00
5	.24	.22	.27	.48	.32	.70	.35	.33	.32	.22	.00	-.21	-.32
6	.63	.59	.65	.52	.44	.17	.35	.86	.43	.44	-.08	.13	.04
7	.45	.54	.38	.47	.60	.31	.81	.31	.50	.27	-.17	-.30	-.05
8	.59	.59	.44	.57	.71	.26	.60	.42	.82	.15	.04	-.22	.00
9	.44	.39	.46	.64	.50	.31	.43	.51	.49	.31	.15	.00	.00
10	.35	.36	.38	.18	.24	.06	.21	.56	.25	.72	-.27	.00	.00
11	-.02	-.04	.19	.28	-.03	.22	.11	.11	.11	-.17	.33	-.22	.00
12	-.20	-.27	-.23	.00	-.12	.12	-.19	-.15	-.11	-.35	.64	.06	.00
13	.11	.08	.16	.00	-.03	-.25	-.17	.14	-.10	.25	.00	.20	.29
14	-.10	-.15	-.09	.00	-.10	-.14	.00	.04	-.04	-.21	.17	.33	.35
15	.21	.19	.25	.06	.16	.00	.10	.20	.26	.24	-.17	-.28	.00

TABLE 12

COMPARISON OF FACTOR STRUCTURES FOR
OPERATIONS
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT OPERATIONS

OPERATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.02	.32	.32	.36	.33	.40	.36	.34	.33	.36	.42	.41	.39
2	.33	.03	.29	.32	.26	.37	.31	.31	.29	.31	.40	.39	.36
3	.34	.27	.22	.17	.07	.25	.21	.21	.20	.23	.27	.28	.25
4	.33	.30	.03	.23	.22	.26	.24	.22	.22	.22	.27	.26	.25
5	.40	.37	.26	.24	.25	.03	.24	.23	.23	.23	.24	.25	.27
6	.34	.31	.22	.20	.21	.24	.21	.04	.20	.19	.26	.23	.23
7	.37	.31	.24	.21	.20	.24	.04	.22	.20	.21	.26	.26	.23
8	.34	.30	.22	.20	.18	.23	.20	.19	.05	.19	.23	.24	.21
9	.37	.33	.22	.10	.20	.22	.20	.19	.19	.19	.21	.20	.21
10	.36	.31	.23	.22	.21	.23	.21	.19	.19	.04	.24	.21	.20
11	.41	.38	.25	.19	.26	.23	.25	.24	.21	.23	.16	.23	.20
12	.43	.41	.28	.25	.27	.25	.26	.25	.23	.24	.05	.18	.19
13	.40	.37	.26	.25	.24	.26	.24	.21	.22	.19	.19	.16	.07
14	.41	.39	.26	.26	.26	.24	.25	.22	.22	.20	.18	.07	.16
15	.38	.34	.23	.23	.20	.23	.22	.20	.19	.18	.19	.20	.16

TABLE 13

COMPARISON OF FACTOR STRUCTURES FOR
MEDICAL
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT MEDICAL

MEDICAL	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.59	.50	.32	.45	.13	.33	.38	.45	.27	-.14	-.13	.05
2	.59	.99	.54	.36	.61	.15	.41	.43	.48	.40	-.27	-.20	.03
3	.50	.53	.99	.39	.45	.21	.32	.40	.37	.29	-.12	-.10	.01
4	.44	.62	.47	.61	.98	.26	.45	.45	.48	.27	-.14	-.25	.01
5	.28	.32	.37	.97	.47	.34	.45	.45	.38	.22	.07	-.15	.00
6	.13	.15	.21	.35	.23	.98	.26	.25	.21	.14	.01	-.02	-.26
7	.31	.40	.30	.46	.42	.27	.98	.35	.37	.29	-.14	-.22	-.04
8	.38	.42	.39	.48	.41	.24	.41	.98	.38	.38	-.21	.06	.04
9	.45	.50	.36	.40	.52	.20	.39	.36	.96	.30	-.05	-.16	.03
10	.25	.37	.27	.21	.29	.12	.28	.34	.25	.97	-.22	-.05	.04
11	-.15	-.27	-.13	.07	-.21	.01	-.15	-.21	-.04	-.30	.95	.09	.00
12	-.14	-.22	-.10	-.12	-.20	-.02	-.23	.04	-.19	-.01	.11	.96	.21
13	.07	.06	.03	-.01	.04	-.25	.00	.05	.06	.02	.03	.11	.95
14	-.03	-.03	.00	.03	-.01	.10	-.05	.00	-.12	.08	.01	.04	-.01

TABLE 14

COMPARISON OF FACTOR STRUCTURES FOR
MEDICAL
USING S-INDICES

FACTORS FOR DATABASE EXCEPT MEDICAL

MEDICAL	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.97	.92	.77	.48	.68	.14	.49	.51	.65	.36	-.05	-.02	.00
2	.95	.96	.73	.48	.68	.15	.51	.53	.61	.38	-.16	-.10	.00
3	.73	.70	.76	.48	.46	.13	.46	.52	.51	.25	-.03	-.03	.00
4	.63	.66	.56	.59	.88	.27	.61	.41	.65	.23	-.11	-.23	.00
5	.43	.47	.49	.84	.49	.42	.44	.51	.52	.22	.08	-.15	-.05
6	.21	.23	.32	.57	.32	.67	.38	.35	.31	.10	.18	-.15	-.30
7	.47	.55	.45	.44	.54	.38	.73	.34	.58	.30	-.13	-.23	.00
8	.46	.46	.52	.49	.33	.14	.38	.81	.38	.36	-.15	.04	.00
9	.59	.59	.42	.43	.63	.19	.53	.34	.85	.33	.00	-.19	.00
10	.32	.33	.34	.22	.19	.00	.27	.43	.23	.71	-.21	-.06	.00
11	-.23	-.21	-.17	.04	-.10	.13	-.12	-.24	-.08	-.48	.74	-.06	.00
12	-.11	-.16	-.08	-.07	-.21	-.27	-.29	.15	-.32	.00	.00	.84	.16
13	.05	.02	.03	.00	.04	-.24	-.05	-.05	.04	.00	.10	.08	.62
14	-.02	-.02	.09	.03	-.10	.13	.00	-.03	-.32	.04	-.05	.08	.00

TABLE 15

COMPARISON OF FACTOR STRUCTURES FOR
MEDICAL
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT MEDICAL

MEDICAL	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.02	.33	.33	.37	.34	.40	.36	.35	.34	.37	.42	.42	.39
2	.33	.03	.29	.33	.27	.37	.32	.31	.30	.31	.41	.39	.36
3	.33	.30	.02	.24	.22	.26	.24	.22	.22	.22	.27	.27	.25
4	.34	.27	.22	.19	.04	.25	.21	.21	.20	.22	.27	.28	.24
5	.38	.34	.24	.05	.21	.23	.21	.20	.21	.23	.24	.26	.24
6	.41	.37	.26	.24	.25	.03	.24	.24	.24	.23	.25	.25	.27
7	.37	.32	.24	.21	.21	.24	.03	.21	.20	.20	.25	.26	.23
8	.35	.32	.22	.20	.21	.24	.21	.03	.20	.19	.26	.22	.22
9	.34	.30	.23	.21	.19	.24	.20	.20	.04	.19	.23	.24	.21
10	.37	.32	.23	.23	.22	.24	.21	.19	.20	.03	.23	.21	.20
11	.43	.41	.28	.25	.28	.25	.26	.26	.23	.24	.04	.19	.20
12	.42	.40	.27	.27	.26	.24	.26	.22	.24	.20	.18	.04	.16
13	.39	.36	.25	.25	.24	.26	.23	.22	.21	.20	.19	.18	.04
14	.40	.37	.24	.24	.23	.22	.23	.21	.21	.18	.18	.17	.17

TABLE 16

COMPARISON OF FACTOR STRUCTURES FOR
MISSILES
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT MISSILES

MISSILES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.61	.51	.32	.47	.13	.34	.39	.46	.29	-.17	-.14	.05
2	.59	.99	.54	.39	.61	.16	.42	.43	.50	.41	-.26	-.19	.03
3	.48	.53	.98	.42	.47	.21	.33	.36	.36	.27	-.10	-.13	.00
4	.30	.37	.41	.97	.53	.29	.43	.48	.39	.26	.05	-.09	.01
5	.45	.64	.49	.58	.96	.26	.43	.45	.46	.29	-.14	-.21	.00
6	.12	.15	.20	.30	.22	.98	.22	.23	.21	.20	.00	-.01	-.30
7	.32	.43	.33	.44	.45	.25	.96	.30	.38	.30	-.18	-.21	-.01
8	.40	.44	.38	.49	.42	.24	.37	.96	.38	.43	-.20	.08	.03
9	.42	.48	.33	.43	.50	.22	.38	.35	.95	.29	-.07	-.13	-.01
10	.27	.40	.30	.23	.29	.19	.32	.35	.34	.93	-.27	-.07	-.01
11	-.11	-.18	-.09	-.09	-.22	.00	-.22	.06	-.11	-.08	.19	.86	.17
12	-.18	-.27	-.11	.04	-.17	-.01	-.17	-.18	-.14	-.27	.91	.17	-.01
13	.04	.01	-.02	.00	.02	-.28	-.01	.05	-.02	.03	.00	.22	.88
14	.33	.39	.32	.25	.49	.06	.23	.22	.42	.17	-.08	-.22	.10
15	.09	.04	.11	.37	.04	.14	.05	-.02	.18	-.08	.38	-.21	.08
16	.09	.07	.02	.12	.17	.05	.07	.04	.11	.03	.08	.15	-.05

TABLE 17

COMPARISON OF FACTOR STRUCTURES FOR
MISSILES
USING S-INDICES

FACTORS FOR DATABASE EXCEPT MISSILES

MISSILES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.98	.92	.77	.50	.67	.11	.47	.53	.64	.34	-.05	-.04	.00
2	.95	.96	.77	.50	.71	.15	.50	.53	.60	.38	-.16	-.06	.00
3	.68	.67	.76	.52	.52	.17	.38	.41	.46	.16	.04	-.10	.00
4	.51	.52	.59	.83	.57	.31	.49	.61	.57	.23	.04	-.12	-.05
5	.64	.66	.64	.62	.79	.27	.51	.46	.56	.26	-.04	-.20	-.04
6	.16	.16	.12	.34	.20	.63	.16	.16	.24	.18	-.07	-.12	-.40
7	.48	.57	.46	.43	.55	.33	.78	.36	.52	.29	-.16	-.25	.00
8	.51	.52	.52	.50	.35	.20	.38	.78	.37	.50	-.09	.12	.00
9	.63	.61	.43	.44	.68	.07	.46	.46	.77	.25	-.04	-.04	.00
10	.30	.35	.24	.10	.27	.11	.32	.29	.35	.56	-.30	-.05	.00
11	-.13	-.22	-.11	-.11	-.19	-.18	-.23	.04	-.23	-.17	.14	.63	.18
12	-.12	-.17	-.12	.00	-.07	.00	-.22	-.09	-.09	-.21	.52	.14	.13
13	.09	.06	.12	.00	.03	-.31	.00	.08	.04	.18	-.07	.18	.50
14	.40	.36	.29	.27	.41	.13	.35	.19	.50	.22	-.05	-.30	.00
15	.09	.04	.08	.32	.09	.34	.15	.04	.15	-.11	.40	-.17	.00
16	.06	.09	-.05	.18	.21	.17	.22	.03	.09	.00	-.05	.09	.00

TABLE 18

COMPARISON OF FACTOR STRUCTURES FOR
MISSILES
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT MISSILES

MISSILES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.03	.32	.33	.37	.34	.41	.37	.35	.34	.37	.43	.42	.40
2	.32	.04	.29	.32	.27	.36	.31	.30	.29	.31	.40	.39	.36
3	.33	.29	.04	.23	.21	.26	.23	.22	.22	.22	.26	.27	.24
4	.37	.33	.23	.05	.19	.24	.21	.20	.21	.22	.24	.25	.24
5	.34	.27	.21	.19	.06	.24	.21	.20	.19	.21	.26	.27	.24
6	.41	.37	.26	.24	.25	.03	.24	.24	.23	.22	.24	.24	.27
7	.37	.32	.24	.22	.21	.24	.05	.22	.21	.21	.26	.26	.24
8	.35	.31	.23	.21	.21	.24	.22	.05	.20	.19	.26	.23	.23
9	.34	.30	.23	.21	.19	.23	.20	.20	.05	.19	.23	.23	.21
10	.37	.32	.22	.23	.21	.23	.20	.19	.18	.05	.23	.21	.20
11	.42	.40	.27	.27	.27	.25	.26	.22	.23	.22	.18	.07	.17
12	.43	.41	.27	.25	.26	.24	.26	.25	.23	.23	.06	.18	.19
13	.40	.37	.26	.25	.24	.27	.24	.22	.22	.20	.19	.17	.06
14	.36	.32	.22	.22	.18	.23	.21	.20	.16	.18	.20	.21	.17
15	.39	.36	.24	.20	.23	.22	.23	.22	.19	.20	.15	.20	.17
16	.38	.36	.24	.23	.21	.22	.22	.21	.19	.18	.17	.16	.17

TABLE 19

COMPARISON OF FACTOR STRUCTURES FOR
COMMUNICATIONS
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT COMMUNICATIONS

COMMUNICATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.59	.50	.31	.46	.14	.33	.39	.43	.28	-.17	-.13	.00
2	.59	.99	.54	.37	.63	.16	.41	.40	.47	.39	-.25	-.20	.00
3	.47	.50	.98	.37	.44	.20	.29	.35	.31	.27	-.10	-.08	.00
4	.41	.44	.42	.56	.48	.27	.42	.97	.44	.39	-.17	.02	.00
5	.46	.60	.49	.58	.96	.25	.42	.47	.52	.30	-.16	-.24	.00
6	.15	.18	.22	.39	.28	.98	.30	.26	.22	.17	.03	-.02	-.20
7	.29	.37	.27	.37	.38	.26	.96	.25	.34	.27	-.13	-.21	-.00
8	.18	.21	.27	.86	.32	.30	.36	.28	.30	.12	.25	-.24	.00
9	.40	.43	.32	.42	.44	.22	.33	.38	.96	.29	-.05	-.10	.00
10	.26	.30	.33	.81	.47	.27	.35	.41	.38	.22	-.03	.08	-.00
11	.26	.38	.28	.27	.30	.17	.32	.36	.27	.96	-.24	-.01	.00
12	-.14	-.23	-.07	.07	-.14	.06	-.08	-.18	-.01	-.25	.93	.06	-.00
13	-.11	-.16	-.06	-.04	-.18	.00	-.18	.11	-.07	.00	.10	.91	.10
14	.00	.00	-.02	-.05	-.03	-.28	-.07	.01	-.05	.00	.01	.18	.92
15	.12	.13	.13	.10	.27	.13	.01	.08	.10	.04	.01	-.05	-.00
16	.14	.19	.30	-.02	.04	.02	.06	.10	.14	.12	-.11	-.25	.00

TABLE 20

COMPARISON OF FACTOR STRUCTURES FOR
COMMUNICATIONS
USING S-INDICES

FACTORS FOR DATABASE EXCEPT COMMUNICATIONS													
COMMUNICATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.97	.93	.75	.50	.67	.13	.51	.50	.62	.33	-.05	-.07	-.03
2	.95	.96	.73	.46	.68	.15	.50	.48	.61	.37	-.14	-.09	.00
3	.70	.65	.72	.43	.48	.07	.44	.45	.44	.34	-.15	.03	.00
4	.58	.57	.58	.64	.45	.28	.34	.79	.46	.31	-.07	-.03	.00
5	.68	.68	.66	.61	.75	.19	.53	.52	.63	.28	-.07	-.12	.00
6	.25	.30	.36	.60	.34	.67	.43	.41	.26	.09	.05	-.14	-.27
7	.41	.50	.33	.35	.44	.29	.63	.18	.48	.29	-.14	-.12	-.06
8	.29	.29	.32	.62	.41	.41	.25	.46	.32	.13	.26	-.13	.00
9	.55	.53	.38	.49	.52	.25	.45	.49	.75	.29	.05	-.12	.00
10	.32	.36	.37	.63	.40	.35	.46	.44	.43	.13	.15	-.09	-.06
11	.31	.34	.31	.14	.18	.06	.33	.38	.15	.70	-.32	.11	.00
12	-.20	-.22	-.19	.00	-.09	.16	-.07	-.26	.00	-.47	.63	.00	.00
13	-.02	-.08	-.03	.00	-.13	-.13	-.16	.16	-.12	.00	.07	.61	.20
14	-.03	-.09	-.07	-.04	-.07	-.24	-.18	-.05	-.05	-.15	.10	.23	.62
15	.10	.09	.17	.12	.11	.17	.12	.03	.00	-.04	.00	-.09	.00
16	.08	.13	.15	-.03	.03	-.04	.00	.10	.16	.00	.15	-.13	.00

TABLE 21

COMPARISON OF FACTOR STRUCTURES FOR
COMMUNICATIONS
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT COMMUNICATIONS

COMMUNICATIONS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.03	.33	.33	.37	.34	.40	.36	.35	.34	.37	.43	.42	.39
2	.33	.03	.29	.34	.27	.37	.32	.32	.31	.32	.41	.40	.37
3	.33	.30	.04	.24	.22	.26	.24	.22	.23	.22	.27	.26	.25
4	.35	.32	.23	.20	.21	.25	.22	.05	.20	.20	.27	.25	.24
5	.34	.28	.21	.19	.06	.25	.21	.20	.18	.21	.27	.27	.24
6	.40	.37	.26	.23	.24	.03	.23	.23	.23	.23	.24	.25	.27
7	.37	.33	.24	.22	.21	.23	.05	.22	.20	.20	.24	.25	.22
8	.39	.35	.24	.11	.22	.22	.21	.21	.20	.21	.19	.24	.21
9	.35	.31	.23	.21	.20	.23	.21	.19	.04	.19	.22	.23	.21
10	.37	.33	.22	.13	.19	.22	.20	.18	.18	.19	.21	.20	.21
11	.37	.32	.23	.22	.21	.23	.20	.19	.19	.04	.23	.20	.19
12	.42	.41	.27	.25	.26	.24	.25	.25	.23	.23	.05	.19	.19
13	.42	.39	.26	.26	.26	.24	.26	.21	.23	.20	.19	.06	.17
14	.40	.37	.26	.26	.24	.27	.24	.22	.22	.20	.19	.17	.05
15	.38	.35	.23	.23	.21	.22	.23	.21	.20	.19	.19	.19	.18
16	.38	.34	.21	.24	.23	.23	.22	.20	.19	.18	.19	.20	.16

TABLE 22

COMPARISON OF FACTOR STRUCTURES FOR
UNIQUE
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT UNIQUE

UNIQUE	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.60	.50	.32	.45	.13	.33	.41	.44	.28	-.16	-.12	.05
2	.60	.99	.55	.39	.63	.16	.45	.45	.49	.40	-.26	-.21	.04
3	.33	.41	.44	.98	.60	.34	.47	.50	.45	.23	.09	-.17	.01
4	.51	.55	.99	.42	.49	.21	.34	.41	.36	.31	-.12	-.11	.02
5	.11	.14	.19	.32	.21	.99	.27	.21	.18	.16	.01	-.02	-.28
6	.31	.42	.31	.43	.43	.26	.98	.34	.33	.32	-.16	-.26	-.03
7	.45	.62	.46	.50	.98	.22	.43	.44	.47	.32	-.20	-.21	.02
8	.39	.43	.38	.46	.42	.21	.34	.98	.35	.39	-.22	.07	.06
9	.44	.48	.35	.39	.49	.19	.33	.39	.99	.27	-.05	-.11	.05
10	.28	.40	.30	.26	.30	.17	.32	.39	.26	.98	-.26	-.02	.01
11	-.17	-.28	-.14	.02	-.21	-.01	-.19	-.21	-.08	-.27	.98	.13	.04
12	-.07	-.14	-.07	-.06	-.16	-.02	-.20	.13	-.05	-.03	.10	.96	.17
13	.05	.03	.02	-.01	-.02	-.25	-.05	.06	.00	.03	.02	.21	.97
14	-.02	.01	.04	.06	.10	.11	.01	-.03	-.04	-.01	.03	-.05	-.04

TABLE 23

COMPARISON OF FACTOR STRUCTURES FOR
UNIQUE
USING S-INDICES

FACTORS FOR DATABASE EXCEPT UNIQUE

UNIQUE	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.92	.76	.49	.66	.18	.47	.52	.62	.34	-.10	-.09	.00
2	.95	.96	.74	.52	.68	.19	.51	.53	.60	.36	-.09	-.10	.00
3	.53	.57	.59	.87	.58	.46	.49	.54	.54	.16	.10	-.09	-.04
4	.82	.83	.90	.59	.58	.23	.50	.63	.50	.36	-.05	-.05	.00
5	.09	.14	.15	.38	.23	.85	.28	.16	.16	.13	.15	-.29	-.40
6	.44	.55	.39	.41	.57	.34	.86	.26	.49	.31	-.17	-.33	-.05
7	.65	.63	.56	.46	.80	.10	.39	.42	.55	.24	-.23	-.13	.00
8	.51	.51	.60	.47	.37	.26	.34	.89	.40	.46	-.17	.04	.05
9	.64	.61	.39	.46	.71	.26	.56	.45	.90	.23	-.04	-.15	.00
10	.36	.36	.37	.18	.22	.11	.19	.48	.26	.83	-.32	.00	.00
11	-.07	-.15	-.06	.04	-.07	.13	-.04	-.17	.00	-.28	.83	.00	.00
12	-.06	-.15	-.08	-.07	-.17	-.20	-.21	.24	-.14	.05	.00	.71	.21
13	.00	-.04	.03	-.04	-.07	-.31	-.09	.09	-.05	.08	.10	.22	.77
14	.02	-.02	.13	.09	-.05	.09	.00	-.13	-.13	-.09	.10	-.09	.00

TABLE 24

COMPARISON OF FACTOR STRUCTURES FOR
UNIQUE
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT UNIQUE													
UNIQUE	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.02	.33	.33	.37	.34	.40	.36	.35	.34	.37	.43	.42	.39
2	.32	.02	.29	.33	.27	.37	.32	.31	.31	.32	.41	.40	.37
3	.37	.33	.24	.05	.20	.25	.22	.21	.22	.25	.26	.29	.26
4	.33	.29	.02	.23	.21	.27	.24	.22	.23	.23	.28	.27	.25
5	.41	.37	.26	.24	.25	.02	.24	.24	.24	.23	.24	.24	.26
6	.37	.32	.24	.22	.21	.24	.03	.22	.21	.20	.26	.27	.24
7	.34	.27	.21	.20	.03	.25	.21	.20	.19	.20	.26	.26	.23
8	.35	.31	.22	.20	.21	.24	.21	.03	.20	.18	.25	.22	.21
9	.34	.30	.23	.21	.19	.24	.21	.20	.02	.20	.23	.23	.21
10	.37	.32	.22	.23	.21	.23	.20	.19	.20	.02	.23	.21	.20
11	.43	.41	.28	.25	.27	.25	.26	.25	.23	.23	.03	.19	.19
12	.41	.39	.27	.26	.26	.25	.26	.21	.23	.21	.19	.04	.17
13	.39	.37	.25	.25	.24	.26	.24	.22	.21	.19	.19	.17	.03
14	.40	.36	.24	.23	.22	.22	.22	.22	.21	.19	.18	.18	.17

TABLE 25

COMPARISON OF FACTOR STRUCTURES FOR
FEMALES
USING COEFFICIENTS OF CONGRUENCE

FEMALES	FACTORS FOR MALES												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.59	.50	.31	.13	.46	.32	.40	.44	.28	-.16	-.13	.05
2	.59	.99	.54	.37	.14	.60	.42	.42	.46	.40	-.26	-.19	.04
3	.50	.54	.99	.40	.20	.47	.33	.39	.34	.30	-.13	-.10	.01
4	.45	.64	.49	.58	.25	.97	.47	.44	.44	.30	-.16	-.23	-.01
5	.27	.34	.39	.98	.34	.51	.42	.46	.39	.21	.10	-.09	.00
6	.09	.11	.18	.32	.99	.19	.25	.21	.16	.16	.02	.00	-.25
7	.32	.42	.33	.49	.28	.44	.99	.38	.34	.32	-.14	-.22	-.03
8	.39	.42	.38	.47	.22	.42	.37	.99	.38	.37	-.19	.06	.04
9	.43	.47	.33	.40	.18	.51	.32	.35	.97	.27	-.05	-.16	.06
10	.27	.39	.29	.27	.17	.30	.32	.38	.28	.98	-.24	-.04	.00
11	-.16	-.27	-.13	.08	.02	-.17	-.14	-.19	-.07	-.27	.98	.11	.04
12	-.14	-.22	-.12	-.13	-.03	-.26	-.22	.04	-.13	-.03	.09	.98	.15
13	.08	.08	.05	.02	-.23	.08	.00	.08	.07	.03	.03	.15	.97
14	.25	.29	.17	.20	.04	.25	.19	.11	.41	-.02	-.01	.01	-.11
15	.13	.15	.07	-.02	-.08	.25	.02	.11	.12	.11	-.15	.01	.06

TABLE 26

COMPARISON OF FACTOR STRUCTURES FOR
FEMALES
USING S-INDICES

FACTORS FOR MALES

FEMALES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.91	.75	.48	.18	.67	.47	.50	.65	.36	-.10	-.07	.00
2	.93	.96	.73	.47	.17	.67	.53	.47	.60	.38	-.18	-.11	.00
3	.79	.74	.86	.50	.14	.50	.42	.55	.48	.38	-.13	-.03	.00
4	.64	.66	.60	.61	.27	.85	.57	.46	.64	.33	-.04	-.17	.00
5	.44	.46	.53	.92	.49	.52	.51	.51	.45	.11	.12	-.11	.00
6	.07	.12	.18	.35	.73	.20	.28	.17	.12	.12	.16	-.25	-.42
7	.43	.50	.38	.49	.43	.46	.82	.37	.46	.31	-.09	-.20	.00
8	.50	.45	.52	.54	.29	.37	.34	.84	.45	.38	-.15	.04	.06
9	.58	.56	.40	.43	.27	.59	.53	.37	.81	.24	.00	-.24	.00
10	.34	.32	.29	.22	.06	.19	.27	.37	.30	.80	-.30	.00	.00
11	-.10	-.15	-.06	.08	.13	-.10	-.08	-.13	-.04	-.25	.83	.06	.00
12	-.09	-.14	-.09	-.11	-.22	-.25	-.30	.08	-.22	.00	.00	.89	.17
13	.00	-.02	.00	.00	-.26	.00	-.05	.05	.00	.00	.00	.18	.89
14	.19	.19	.05	.16	.05	.32	.20	.07	.40	-.10	.06	.00	.00
15	.19	.15	.03	.00	-.14	.17	.03	.14	.26	.14	-.17	.00	.00

TABLE 27

COMPARISON OF FACTOR STRUCTURES FOR
FEMALES
USING ROOT MEAN SQUARE

		FACTORS FOR MALES											
FEMALES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.02	.33	.33	.37	.41	.34	.37	.35	.34	.37	.43	.42	.39
2	.32	.03	.28	.33	.37	.27	.31	.31	.30	.31	.40	.39	.35
3	.33	.30	.02	.24	.27	.22	.24	.22	.23	.23	.28	.27	.25
4	.34	.27	.21	.19	.25	.04	.21	.21	.20	.22	.27	.27	.24
5	.38	.34	.23	.03	.23	.20	.21	.20	.21	.23	.24	.26	.24
6	.41	.38	.27	.24	.03	.25	.24	.24	.24	.23	.24	.24	.26
7	.37	.32	.24	.21	.24	.21	.02	.21	.21	.21	.26	.26	.24
8	.35	.32	.22	.21	.24	.21	.21	.03	.20	.19	.25	.22	.22
9	.34	.31	.23	.22	.24	.19	.22	.20	.04	.20	.23	.24	.21
10	.37	.32	.23	.23	.23	.21	.21	.19	.19	.03	.23	.21	.20
11	.43	.41	.28	.25	.25	.27	.26	.25	.23	.24	.02	.19	.19
12	.42	.40	.27	.27	.25	.27	.26	.22	.23	.21	.19	.02	.17
13	.39	.36	.25	.25	.26	.23	.23	.21	.20	.20	.19	.17	.03
14	.37	.33	.23	.23	.23	.21	.21	.20	.16	.19	.18	.18	.18
15	.38	.35	.24	.25	.24	.20	.22	.20	.19	.18	.20	.18	.17

TABLE 28

COMPARISON OF FACTOR STRUCTURES FOR
WHITES
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT WHITES

WHITES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.60	.32	.49	.46	.13	.34	.40	.45	.30	-.17	-.12	.07
2	.60	.99	.39	.53	.63	.16	.45	.44	.49	.41	-.28	-.19	.06
3	.50	.56	.42	.99	.49	.22	.36	.41	.38	.31	-.13	-.09	.03
4	.31	.40	.99	.41	.54	.35	.50	.50	.42	.26	.05	-.09	.02
5	.45	.64	.55	.46	.99	.24	.47	.46	.49	.31	-.18	-.21	.03
6	.13	.16	.35	.22	.24	.99	.28	.24	.21	.18	.02	.00	-.24
7	.33	.44	.48	.33	.45	.27	.99	.37	.36	.31	-.14	-.21	-.01
8	.40	.44	.49	.39	.44	.24	.39	.99	.39	.40	-.18	.08	.06
9	.44	.49	.43	.34	.49	.21	.37	.40	.99	.29	-.05	-.10	.06
10	.29	.41	.26	.30	.32	.17	.32	.39	.29	.99	-.24	-.02	.02
11	-.16	-.26	.07	-.12	-.18	.02	-.15	-.18	-.06	-.26	.99	.11	.05
12	-.12	-.20	-.12	-.09	-.25	-.01	-.22	.05	-.12	-.03	.12	.97	.14
13	.05	.03	-.01	.01	.03	-.23	-.02	.06	.02	.02	.03	.17	.98
14	.00	.02	.13	.04	.01	.11	.06	.01	.01	-.07	.07	.01	-.10

TABLE 29

COMPARISON OF FACTOR STRUCTURES FOR
WHITES
USING S-INDICES

FACTORS FOR DATABASE EXCEPT WHITES

WHITES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.96	.94	.48	.73	.63	.11	.49	.53	.63	.37	-.10	-.09	.00
2	.94	.98	.51	.71	.66	.14	.55	.50	.61	.39	-.11	-.16	-.02
3	.76	.74	.54	.87	.55	.21	.45	.55	.47	.35	.00	-.11	.00
4	.52	.50	.97	.53	.55	.42	.47	.53	.49	.20	.04	-.07	.05
5	.68	.67	.49	.45	.86	.20	.54	.42	.68	.30	-.07	-.22	-.04
6	.20	.16	.45	.15	.30	.91	.38	.19	.22	.05	.14	-.23	-.26
7	.53	.52	.47	.38	.54	.27	.87	.31	.50	.28	-.04	-.23	-.05
8	.50	.51	.51	.61	.45	.20	.35	.91	.43	.44	-.18	.12	.00
9	.64	.59	.45	.31	.62	.24	.59	.40	.94	.25	.04	-.23	.00
10	.35	.37	.21	.36	.37	.06	.34	.46	.22	.82	-.21	.00	.00
11	-.02	-.18	.12	-.10	-.04	.15	-.13	-.09	.04	-.30	.91	.07	.12
12	-.09	-.10	-.17	.03	-.23	-.29	-.29	.15	-.21	.05	-.07	.81	.08
13	.00	.00	-.04	.00	.00	-.40	.00	.05	.00	.00	.00	.18	.80
14	.02	.04	.09	.08	.09	.15	.10	-.03	.00	-.17	.11	.00	.07

TABLE 30

COMPARISON OF FACTOR STRUCTURES FOR
WHITES
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT WHITES

WHITES	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.01	.32	.37	.33	.34	.40	.36	.35	.34	.36	.43	.42	.39
2	.33	.02	.33	.29	.27	.37	.31	.31	.30	.32	.41	.39	.36
3	.33	.29	.23	.02	.21	.26	.23	.22	.22	.22	.28	.27	.25
4	.37	.33	.02	.23	.20	.24	.20	.20	.21	.23	.25	.26	.25
5	.34	.27	.20	.21	.03	.25	.20	.20	.19	.21	.27	.26	.24
6	.41	.37	.24	.26	.25	.02	.24	.24	.23	.23	.24	.24	.26
7	.37	.32	.21	.24	.21	.24	.02	.21	.21	.21	.26	.26	.23
8	.35	.32	.20	.22	.21	.24	.21	.02	.19	.18	.25	.22	.22
9	.34	.30	.21	.22	.19	.23	.20	.19	.02	.19	.23	.23	.21
10	.37	.32	.23	.22	.21	.23	.20	.18	.19	.02	.23	.20	.20
11	.43	.41	.25	.27	.27	.24	.26	.25	.23	.23	.02	.19	.19
12	.42	.40	.27	.26	.27	.24	.26	.22	.23	.21	.19	.03	.18
13	.40	.37	.25	.25	.24	.26	.23	.21	.21	.20	.19	.17	.02
14	.40	.37	.23	.24	.23	.22	.22	.21	.20	.19	.17	.17	.18

TABLE 31

COMPARISON OF FACTOR STRUCTURES FOR
BLACKS
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT BLACKS

BLACKS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.60	.51	.33	.46	.14	.34	.40	.44	.29	-.16	-.13	.04
2	.61	.99	.56	.41	.65	.17	.44	.44	.50	.40	-.25	-.20	.03
3	.34	.40	.43	.99	.56	.35	.47	.49	.45	.27	.06	-.11	.00
4	.49	.52	.99	.41	.46	.22	.32	.39	.34	.30	-.10	-.07	.00
5	.47	.62	.49	.53	.98	.24	.46	.42	.51	.32	-.18	-.25	.04
6	.16	.19	.24	.35	.27	.99	.28	.25	.23	.19	.01	.01	-.22
7	.35	.45	.36	.49	.47	.27	.99	.39	.38	.32	.15	-.20	-.01
8	.41	.44	.41	.50	.47	.25	.39	.99	.42	.40	-.18	.06	.05
9	.44	.48	.39	.44	.48	.22	.38	.39	.98	.29	-.04	-.13	.02
10	.30	.41	.32	.27	.29	.19	.31	.40	.30	.98	-.24	-.03	.02
11	-.16	-.25	-.12	.06	-.18	.02	-.13	-.17	-.06	-.23	.98	.13	.03
12	-.13	-.21	-.09	-.09	-.23	.02	-.20	.06	-.12	-.02	.12	.95	.16
13	.07	.06	.04	.01	.03	-.23	.01	.06	.05	.01	.04	.11	.97
14	.04	.07	.14	.19	.20	.14	.13	.01	.09	-.02	.09	-.16	-.02

TABLE 32

COMPARISON OF FACTOR STRUCTURES FOR
BLACKS
USING S-INDICES

FACTORS FOR DATABASE EXCEPT BLACKS

BLACKS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.95	.95	.76	.51	.68	.19	.50	.50	.63	.36	-.05	-.08	.00
2	.93	.98	.79	.55	.71	.20	.51	.52	.61	.36	-.09	-.08	.00
3	.54	.56	.57	.93	.51	.42	.51	.49	.47	.23	.11	-.13	-.04
4	.72	.68	.82	.48	.52	.16	.38	.56	.42	.35	-.11	.00	.00
5	.68	.70	.61	.55	.86	.31	.52	.43	.66	.28	-.03	-.18	.00
6	.20	.24	.27	.49	.27	.76	.37	.35	.33	.16	.13	-.11	-.25
7	.50	.57	.50	.51	.55	.36	.81	.40	.58	.29	-.12	-.18	.00
8	.53	.50	.54	.53	.44	.19	.32	.90	.40	.42	-.09	.15	.05
9	.60	.58	.44	.44	.61	.19	.46	.32	.90	.23	.09	-.19	.00
10	.40	.39	.43	.28	.21	.05	.33	.42	.32	.74	-.25	.00	.00
11	-.05	-.09	.00	.09	-.04	.15	.00	-.10	.09	-.15	.86	-.07	.00
12	-.12	-.19	-.14	-.15	-.23	-.24	-.20	.08	-.24	.00	.00	.76	.20
13	-.05	-.07	-.03	-.05	-.04	-.33	-.05	.00	-.05	.00	.00	.08	.73
14	.12	.11	.22	.15	.11	.17	.19	-.07	.09	-.09	.05	-.17	.00

TABLE 33

COMPARISON OF FACTOR STRUCTURES FOR
BLACKS
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT BLACKS

BLACKS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.02	.32	.32	.37	.34	.40	.36	.35	.34	.36	.42	.42	.39
2	.32	.02	.29	.32	.26	.37	.31	.31	.30	.32	.41	.40	.36
3	.37	.33	.23	.02	.19	.24	.21	.20	.20	.22	.25	.27	.25
4	.33	.30	.03	.23	.21	.26	.24	.22	.22	.22	.27	.26	.25
5	.34	.27	.21	.20	.03	.25	.21	.21	.19	.21	.27	.27	.24
6	.40	.37	.26	.23	.24	.03	.24	.23	.23	.22	.24	.24	.26
7	.36	.31	.23	.21	.20	.24	.02	.21	.20	.20	.25	.26	.23
8	.35	.31	.22	.20	.20	.24	.21	.02	.19	.18	.25	.22	.22
9	.34	.30	.22	.21	.19	.23	.20	.19	.03	.19	.22	.23	.21
10	.36	.32	.22	.23	.21	.23	.21	.18	.19	.02	.23	.21	.20
11	.42	.41	.27	.25	.27	.24	.26	.25	.23	.23	.02	.18	.19
12	.42	.40	.27	.26	.27	.24	.26	.22	.23	.20	.18	.04	.17
13	.39	.36	.25	.25	.24	.26	.23	.22	.21	.20	.19	.18	.03
14	.39	.36	.23	.22	.21	.22	.21	.21	.20	.19	.17	.19	.17

TABLE 34

COMPARISON OF FACTOR STRUCTURES FOR
HISPANICS
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT HISPANICS													
HISPANICS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.59	.49	.31	.44	.11	.32	.39	.44	.29	-.15	-.12	.05
2	.60	.99	.56	.39	.63	.16	.44	.43	.49	.41	-.26	-.19	.03
3	.31	.38	.41	.98	.55	.34	.47	.51	.41	.27	.08	-.09	.00
4	.48	.54	.99	.40	.45	.21	.33	.38	.33	.30	-.13	-.09	.01
5	.45	.62	.50	.57	.98	.25	.47	.46	.45	.30	-.18	-.23	.03
6	.10	.13	.20	.33	.21	.98	.24	.23	.19	.17	.03	.03	-.20
7	.35	.46	.36	.51	.49	.27	.98	.41	.36	.36	-.16	-.22	-.01
8	.39	.43	.40	.50	.45	.24	.38	.98	.39	.38	-.16	.03	.06
9	.45	.49	.37	.39	.49	.20	.35	.38	.99	.27	-.05	-.12	.03
10	.30	.41	.32	.27	.32	.18	.35	.39	.30	.98	-.27	-.03	.03
11	-.16	-.27	-.12	.07	-.19	.03	-.14	-.17	-.04	-.23	.98	.11	.04
12	-.10	-.16	-.09	-.07	-.17	.01	-.18	.11	-.07	-.02	.13	.97	.17
13	.06	.04	.02	.05	.04	-.19	-.01	.03	.06	.01	.08	.13	.96
14	.17	.21	.12	.07	.28	-.03	.04	.15	.23	.17	-.09	-.07	.12

TABLE 35

COMPARISON OF FACTOR STRUCTURES FOR
HISPANICS
USING S-INDICES

FACTORS FOR DATABASE EXCEPT HISPANICS

HISPANICS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.98	.93	.76	.50	.66	.15	.50	.54	.61	.37	-.07	-.04	.00
2	.95	.96	.76	.49	.66	.15	.52	.51	.59	.36	-.14	-.06	.00
3	.48	.52	.56	.92	.56	.45	.53	.54	.50	.28	.12	-.07	.00
4	.80	.77	.81	.49	.44	.12	.51	.54	.44	.38	-.13	.03	.00
5	.64	.67	.64	.63	.74	.31	.61	.56	.55	.34	-.08	-.20	.00
6	.14	.14	.24	.42	.17	.61	.20	.20	.12	.12	.07	.00	-.20
7	.52	.56	.55	.58	.55	.38	.80	.43	.51	.34	-.09	-.26	.00
8	.49	.51	.61	.55	.42	.30	.37	.87	.48	.42	-.04	.00	.05
9	.62	.57	.41	.47	.63	.12	.46	.41	.89	.15	.00	-.12	.00
10	.33	.34	.34	.18	.16	.11	.26	.42	.22	.72	-.27	.00	.00
11	-.12	-.13	-.03	.04	-.07	.14	-.09	-.13	.00	-.28	.96	.00	.00
12	-.05	-.11	-.03	.00	-.11	-.20	-.13	.22	-.13	.00	.08	.73	.24
13	.00	-.02	.03	.04	.04	-.16	-.05	-.05	.05	.00	.21	.08	.67
14	.08	.06	.03	-.13	.03	-.20	-.17	.11	.00	.20	-.06	.05	.00

TABLE 37

COMPARISON OF FACTOR STRUCTURES FOR
OTHERS (RACE)
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT OTHERS (RACE)

OTHERS (RACE)													
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.60	.50	.31	.45	.12	.32	.39	.44	.29	-.17	-.12	.06
2	.60	.99	.55	.39	.65	.15	.44	.43	.50	.41	-.28	-.21	.05
3	.31	.38	.42	.99	.54	.36	.49	.49	.42	.26	.07	-.11	-.02
4	.50	.54	.99	.43	.48	.22	.35	.39	.35	.30	-.13	-.10	.01
5	.12	.15	.22	.35	.23	.99	.28	.23	.19	.17	.02	-.01	-.25
6	.45	.62	.49	.54	.99	.24	.45	.44	.48	.31	-.18	-.23	.03
7	.33	.45	.36	.51	.48	.28	.99	.40	.38	.33	-.15	-.22	-.01
8	.40	.44	.40	.49	.45	.23	.37	.99	.40	.38	-.17	.05	.08
9	.45	.49	.37	.43	.51	.20	.37	.41	.99	.29	-.06	-.12	.03
10	.30	.41	.30	.26	.32	.17	.32	.39	.29	.99	-.26	-.03	.02
11	-.18	-.29	-.13	.04	-.19	.01	-.15	-.17	-.06	-.24	.98	.13	.05
12	-.11	-.20	-.10	-.10	-.22	-.01	-.22	.06	-.09	-.02	.14	.98	.17
13	.07	.05	.01	.01	.03	-.25	-.02	.07	.05	.01	.06	.17	.98
14	.05	.09	.09	.23	.14	.16	.11	.04	.03	.01	.09	-.06	-.05

TABLE 38

COMPARISON OF FACTOR STRUCTURES FOR
OTHERS (RACE)
USING S-INDICES

FACTORS FOR DATABASE EXCEPT OTHERS (RACE)

OTHERS (RACE)	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.97	.93	.74	.47	.66	.13	.44	.52	.61	.35	-.09	-.07	.00
2	.92	.99	.74	.50	.69	.18	.53	.50	.59	.36	-.15	-.12	-.02
3	.51	.53	.55	.94	.54	.46	.49	.56	.49	.23	.11	-.07	-.04
4	.73	.73	.92	.57	.48	.21	.40	.59	.35	.32	.00	-.06	.00
5	.09	.16	.23	.44	.25	.91	.35	.19	.19	.06	.14	-.23	-.36
6	.61	.63	.60	.53	.85	.27	.47	.47	.58	.34	-.11	-.20	.00
7	.49	.55	.46	.49	.52	.38	.86	.37	.51	.30	-.13	-.26	.00
8	.56	.53	.59	.57	.39	.22	.34	.90	.34	.41	-.08	.07	.05
9	.63	.61	.38	.53	.70	.25	.53	.42	.92	.22	.04	-.22	.00
10	.41	.40	.43	.17	.26	.05	.28	.49	.28	.85	-.29	-.05	.00
11	-.10	-.15	-.03	.04	-.07	.13	-.09	-.17	.00	-.33	.92	.00	.00
12	-.11	-.19	-.14	-.07	-.27	-.26	-.29	.11	-.29	.00	.06	.87	.15
13	-.05	-.09	-.03	-.09	-.04	-.37	-.09	-.09	-.05	.00	.10	.07	.71
14	.09	.08	.20	.18	.03	.22	.15	.00	-.04	.06	.00	-.11	.00

TABLE 39

COMPARISON OF FACTOR STRUCTURES FOR
OTHERS (RACE)
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT OTHERS (RACE)

OTHERS (RACE)													
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.01	.33	.33	.38	.34	.41	.37	.35	.34	.37	.43	.42	.40
2	.33	.02	.30	.34	.27	.38	.32	.32	.31	.33	.42	.41	.38
3	.37	.33	.23	.02	.20	.24	.21	.20	.21	.23	.25	.27	.25
4	.33	.29	.02	.23	.21	.26	.23	.22	.22	.22	.27	.27	.25
5	.41	.37	.26	.24	.25	.01	.24	.24	.24	.23	.25	.25	.26
6	.34	.27	.21	.20	.02	.25	.21	.20	.19	.21	.27	.27	.24
7	.36	.31	.23	.20	.20	.24	.02	.21	.20	.20	.26	.26	.24
8	.35	.31	.22	.20	.20	.24	.21	.02	.19	.19	.25	.22	.21
9	.34	.30	.22	.21	.19	.24	.21	.19	.02	.19	.23	.23	.21
10	.36	.32	.22	.23	.21	.23	.20	.18	.19	.02	.23	.21	.20
11	.43	.41	.27	.25	.27	.24	.26	.25	.23	.23	.02	.18	.19
12	.42	.40	.27	.26	.27	.24	.26	.22	.23	.21	.18	.02	.17
13	.39	.36	.25	.25	.24	.26	.24	.21	.21	.20	.19	.17	.02
14	.39	.36	.24	.22	.22	.22	.22	.21	.20	.19	.18	.19	.18

TABLE 36

COMPARISON OF FACTOR STRUCTURES FOR
HISPANICS
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT HISPANICS

HISPANICS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.03	.33	.34	.38	.35	.41	.37	.36	.35	.37	.43	.42	.40
2	.33	.02	.29	.33	.27	.38	.32	.32	.31	.32	.41	.40	.37
3	.37	.33	.24	.03	.20	.24	.21	.20	.21	.23	.25	.27	.25
4	.33	.29	.03	.23	.22	.26	.24	.22	.23	.22	.27	.26	.25
5	.34	.27	.21	.19	.04	.25	.21	.20	.20	.22	.27	.27	.24
6	.41	.38	.26	.24	.25	.03	.24	.24	.24	.23	.24	.24	.26
7	.36	.31	.23	.20	.20	.24	.03	.20	.21	.20	.26	.26	.23
8	.35	.31	.22	.20	.20	.23	.21	.03	.19	.18	.25	.22	.21
9	.34	.30	.22	.22	.19	.24	.21	.20	.02	.20	.23	.23	.21
10	.36	.32	.22	.23	.21	.23	.20	.18	.19	.03	.23	.21	.19
11	.43	.41	.28	.25	.27	.24	.26	.25	.23	.23	.03	.19	.19
12	.41	.39	.27	.26	.26	.24	.25	.21	.22	.20	.18	.03	.17
13	.39	.37	.25	.25	.24	.26	.24	.22	.21	.20	.19	.18	.04
14	.38	.34	.24	.24	.20	.24	.22	.20	.18	.17	.19	.19	.16

TABLE 40

COMPARISON OF FACTOR STRUCTURES FOR
ENLISTEDS
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT ENLISTEDS

ENLISTEDS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.62	.50	.30	.10	.30	.40	.46	.43	.28	-.17	-.08	.06
2	.62	.99	.53	.37	.12	.40	.45	.51	.61	.40	-.25	-.13	.05
3	.50	.55	.99	.40	.18	.29	.39	.36	.44	.29	-.13	-.06	.04
4	.31	.38	.40	.98	.32	.45	.48	.43	.49	.25	.07	-.03	.00
5	.47	.62	.47	.57	.18	.39	.47	.58	.96	.31	-.18	-.18	.08
6	.12	.14	.19	.33	.99	.25	.22	.21	.20	.17	.02	.01	-.22
7	.33	.42	.30	.47	.25	.98	.39	.37	.43	.32	-.16	-.17	.00
8	.41	.44	.39	.48	.21	.36	.98	.36	.43	.40	-.21	.11	.09
9	.44	.50	.34	.42	.21	.36	.36	.96	.39	.27	-.04	-.08	-.01
10	.29	.39	.29	.21	.16	.30	.38	.27	.30	.99	-.27	.01	.03
11	-.17	-.26	-.12	.08	.03	-.14	-.18	-.06	-.19	-.25	.98	.11	.02
12	-.12	-.18	-.08	-.11	.01	-.19	.06	-.17	-.14	-.02	.09	.97	.18
13	.06	.06	.03	.02	-.24	-.01	.07	.03	.03	.01	.04	.18	.96
14	.05	.07	.11	.19	.12	.06	.06	.04	.23	-.03	.04	-.04	-.07

TABLE 41

COMPARISON OF FACTOR STRUCTURES FOR
ENLISTEDS
USING S-INDICES

FACTORS FOR DATABASE EXCEPT ENLISTEDS

ENLISTEDS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.97	.99	.74	.49	.15	.49	.58	.59	.57	.40	-.09	-.02	-.02
2	.93	.97	.71	.47	.15	.52	.57	.56	.57	.40	-.20	-.06	-.05
3	.78	.75	.83	.53	.17	.37	.59	.43	.48	.38	-.06	.03	.00
4	.50	.53	.53	.90	.42	.44	.55	.45	.49	.20	.08	.03	-.04
5	.66	.67	.49	.53	.22	.47	.48	.66	.77	.30	-.13	-.12	-.04
6	.14	.13	.13	.43	.79	.24	.23	.24	.16	.11	.14	-.17	-.33
7	.47	.52	.27	.45	.31	.74	.36	.54	.43	.25	-.13	-.15	-.09
8	.53	.54	.59	.59	.19	.35	.89	.31	.52	.51	-.08	.22	.05
9	.58	.55	.35	.52	.20	.42	.37	.91	.36	.26	.04	-.15	-.05
10	.34	.37	.28	.18	.12	.32	.41	.23	.31	.86	-.27	-.05	.00
11	-.12	-.11	-.07	.08	.14	-.18	-.17	.04	-.18	-.26	.92	.00	.11
12	-.05	-.04	.03	-.07	-.24	-.16	.04	-.23	-.08	.05	.07	.81	.16
13	.00	.00	.00	-.04	-.36	-.05	.05	.00	.00	.00	.00	.24	.62
14	.08	.08	.16	.12	.19	.14	.06	.07	.13	-.04	.00	.09	-.12

TABLE 42

COMPARISON OF FACTOR STRUCTURES FOR
ENLISTEDS
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT ENLISTEDS

ENLISTEDS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.03	.32	.33	.37	.41	.37	.35	.34	.34	.37	.43	.41	.39
2	.32	.04	.29	.33	.38	.32	.31	.30	.27	.32	.41	.39	.36
3	.33	.29	.02	.24	.26	.24	.22	.23	.21	.22	.28	.26	.25
4	.37	.33	.24	.04	.24	.21	.21	.21	.20	.23	.25	.26	.25
5	.34	.27	.22	.20	.26	.22	.21	.18	.06	.22	.27	.27	.24
6	.41	.38	.27	.24	.02	.24	.24	.24	.24	.23	.25	.24	.26
7	.36	.32	.25	.21	.24	.03	.21	.21	.20	.20	.26	.25	.23
8	.35	.31	.22	.20	.24	.21	.03	.21	.19	.18	.25	.21	.21
9	.34	.30	.23	.21	.23	.20	.20	.05	.19	.19	.22	.22	.21
10	.37	.32	.23	.24	.23	.20	.19	.20	.20	.02	.24	.20	.20
11	.43	.41	.28	.25	.24	.25	.26	.24	.25	.23	.02	.19	.19
12	.42	.39	.27	.27	.24	.26	.23	.25	.24	.21	.19	.03	.17
13	.39	.36	.25	.25	.26	.23	.22	.22	.22	.20	.19	.17	.03
14	.39	.36	.24	.23	.21	.22	.21	.21	.19	.19	.18	.18	.18

TABLE 43

COMPARISON OF FACTOR STRUCTURES FOR
OFFICERS
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT OFFICERS

OFFICERS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.60	.49	.31	.45	.12	.32	.40	.43	.27	-.17	-.11	.06
2	.61	.99	.56	.39	.62	.15	.44	.46	.51	.41	-.27	-.19	.06
3	.33	.41	.42	.97	.59	.33	.51	.50	.46	.23	.06	-.15	.05
4	.50	.55	.99	.41	.48	.19	.29	.41	.35	.28	-.12	-.08	.04
5	.29	.42	.27	.41	.45	.25	.97	.31	.34	.30	-.20	-.23	-.02
6	.14	.17	.21	.36	.25	.99	.26	.27	.19	.18	.01	.02	-.24
7	.42	.47	.41	.49	.44	.24	.39	.98	.41	.39	-.20	.06	.03
8	.41	.60	.45	.55	.95	.22	.40	.45	.42	.26	-.17	-.15	.00
9	.45	.52	.36	.44	.60	.20	.39	.39	.94	.31	-.09	-.15	.05
10	.28	.42	.28	.25	.33	.16	.31	.39	.30	.98	-.26	-.06	.01
11	-.15	-.26	-.13	.02	-.20	-.03	-.20	-.16	-.10	-.27	.96	.11	.07
12	-.07	-.14	-.02	-.03	-.17	.02	-.18	.12	-.04	.00	.11	.92	.19
13	.04	.03	.00	.00	.02	-.23	-.06	.03	-.02	.03	.07	.23	.93
14	.08	.13	.08	-.10	.27	-.08	.06	.11	.05	.13	-.22	-.09	.06
15	.24	.18	.10	.18	.15	.03	.10	.09	.29	-.04	.09	.14	-.10

TABLE 44

COMPARISON OF FACTOR STRUCTURES FOR
OFFICERS
USING S-INDICES

FACTORS FOR DATABASE EXCEPT OFFICERS

OFFICERS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.96	.92	.76	.49	.69	.14	.44	.53	.62	.26	-.05	-.05	.00
2	.93	.97	.78	.54	.71	.15	.52	.57	.58	.33	-.09	-.02	.00
3	.49	.51	.54	.88	.59	.45	.54	.56	.55	.17	.08	-.10	-.04
4	.77	.72	.84	.53	.49	.13	.29	.60	.41	.22	-.03	.03	.00
5	.45	.53	.38	.47	.57	.24	.76	.34	.46	.31	-.17	-.27	-.05
6	.13	.14	.25	.50	.27	.82	.30	.30	.19	.12	.07	-.11	-.35
7	.62	.62	.61	.56	.51	.25	.44	.86	.48	.39	-.12	.03	.00
8	.55	.54	.51	.48	.78	.24	.49	.52	.57	.24	-.09	-.16	.00
9	.61	.57	.46	.48	.61	.20	.52	.46	.72	.33	-.05	-.16	.00
10	.37	.37	.41	.18	.26	.11	.25	.51	.23	.80	-.27	.06	.00
11	-.12	-.18	-.06	.08	-.03	.15	-.13	-.13	.09	-.37	.73	-.07	.00
12	-.07	-.09	.03	-.11	-.19	-.19	-.20	.20	-.12	-.19	.00	.63	.20
13	-.03	-.05	.03	.00	.00	-.17	.00	.05	-.05	.00	.11	.17	.50
14	.13	.14	.10	.00	.14	-.05	.17	.03	.14	.20	-.29	-.24	.00
15	.19	.17	-.03	.19	.33	.05	.13	.10	.45	.05	.11	.20	.00

TABLE 45

COMPARISON OF FACTOR STRUCTURES FOR
OFFICERS
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT OFFICERS

OFFICERS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.03	.32	.32	.36	.33	.39	.35	.33	.33	.35	.41	.40	.38
2	.32	.03	.29	.32	.27	.37	.31	.30	.29	.31	.41	.39	.36
3	.37	.33	.24	.05	.20	.25	.21	.21	.22	.24	.26	.29	.26
4	.33	.29	.03	.24	.22	.27	.25	.22	.23	.23	.28	.27	.25
5	.37	.32	.25	.22	.21	.24	.05	.22	.21	.21	.26	.26	.24
6	.40	.37	.26	.23	.24	.02	.24	.23	.23	.22	.24	.23	.26
7	.35	.30	.22	.20	.21	.24	.21	.04	.20	.19	.26	.23	.22
8	.35	.28	.21	.19	.06	.24	.21	.19	.19	.21	.25	.25	.22
9	.34	.30	.23	.21	.17	.24	.21	.19	.06	.19	.24	.24	.21
10	.37	.31	.23	.23	.21	.23	.21	.19	.19	.03	.24	.21	.20
11	.43	.41	.27	.25	.27	.25	.26	.25	.23	.23	.04	.19	.18
12	.41	.39	.26	.25	.27	.24	.26	.21	.22	.20	.19	.05	.17
13	.40	.36	.25	.25	.24	.26	.24	.22	.22	.19	.18	.16	.05
14	.39	.35	.24	.26	.21	.24	.23	.21	.21	.18	.21	.19	.17
15	.37	.34	.24	.22	.22	.23	.22	.20	.18	.19	.18	.17	.18

TABLE 46

COMPARISON OF FACTOR STRUCTURES FOR
CIVILIANS
USING COEFFICIENTS OF CONGRUENCE

FACTORS FOR DATABASE EXCEPT CIVILIANS													
CIVILIANS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.63	.51	.32	.48	.12	.33	.41	.45	.30	-.18	-.12	.05
2	.62	.99	.55	.37	.61	.14	.41	.44	.49	.39	-.25	-.19	.05
3	.50	.54	.99	.39	.46	.19	.30	.38	.34	.29	-.12	-.09	.02
4	.26	.32	.37	.97	.49	.33	.42	.44	.38	.19	.12	-.10	-.01
5	.08	.10	.17	.31	.15	.98	.25	.19	.17	.16	.03	.00	-.24
6	.31	.41	.31	.49	.40	.28	.98	.39	.38	.32	-.12	-.20	-.04
7	.49	.54	.37	.42	.63	.18	.37	.37	.95	.28	-.06	-.20	.05
8	.46	.65	.48	.55	.95	.24	.44	.46	.42	.31	-.16	-.14	.00
9	.41	.44	.38	.48	.44	.21	.35	.98	.36	.37	-.18	.07	.07
10	.30	.41	.31	.27	.31	.19	.33	.40	.30	.98	-.25	-.02	.00
11	-.20	-.28	-.15	.05	-.21	.03	-.15	-.24	-.07	-.25	.96	.10	.04
12	-.07	-.12	-.06	-.05	-.15	-.02	-.16	.13	-.06	.01	.09	.97	.20
13	.09	.08	.06	.04	.12	-.20	-.01	.11	.04	.01	.04	.17	.96
14	-.02	-.02	.01	.09	-.17	.08	.02	-.06	.14	-.11	.11	-.04	-.08

TABLE 47

COMPARISON OF FACTOR STRUCTURES FOR
CIVILIANS
USING S-INDICES

FACTORS FOR DATABASE EXCEPT CIVILIANS

CIVILIANS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.97	.91	.79	.50	.64	.14	.45	.51	.63	.36	-.12	-.04	.00
2	.97	.95	.76	.53	.64	.15	.50	.52	.60	.38	-.14	-.06	.00
3	.80	.73	.81	.49	.47	.12	.33	.51	.47	.33	-.10	-.03	.00
4	.45	.47	.50	.86	.49	.48	.42	.51	.46	.18	.13	-.11	-.05
5	.13	.16	.20	.36	.16	.73	.31	.16	.15	.18	.07	-.24	-.38
6	.46	.50	.41	.44	.42	.33	.78	.36	.49	.36	-.09	-.24	.00
7	.61	.59	.47	.45	.70	.23	.54	.35	.92	.19	.00	-.23	.00
8	.62	.61	.55	.58	.74	.19	.48	.51	.47	.33	-.13	-.07	.00
9	.55	.50	.57	.49	.41	.24	.32	.84	.29	.39	-.14	.04	.05
10	.41	.39	.35	.23	.25	.11	.29	.48	.28	.79	-.26	.05	.00
11	-.13	-.18	-.08	.07	-.16	.12	-.08	-.16	.00	-.29	.74	.00	.00
12	-.04	-.10	-.03	-.04	-.16	-.18	-.16	.16	-.19	-.12	.00	.76	.29
13	.05	.00	.03	.04	.07	-.31	-.05	.09	.09	.07	.10	.07	.57
14	.06	.04	.05	.19	.00	.20	.03	-.04	.13	-.20	.18	-.05	.00

TABLE 48

COMPARISON OF FACTOR STRUCTURES FOR
CIVILIANS
USING ROOT MEAN SQUARE

FACTORS FOR DATABASE EXCEPT CIVILIANS													
CIVILIANS	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.04	.32	.33	.38	.34	.41	.37	.35	.35	.37	.44	.43	.40
2	.31	.04	.29	.33	.27	.37	.32	.31	.30	.32	.40	.39	.36
3	.33	.29	.02	.24	.22	.27	.25	.23	.23	.23	.28	.27	.26
4	.38	.34	.23	.05	.20	.23	.21	.20	.21	.23	.23	.26	.24
5	.41	.38	.27	.24	.26	.03	.24	.24	.23	.23	.24	.24	.26
6	.37	.32	.24	.21	.22	.24	.03	.21	.20	.21	.26	.26	.24
7	.33	.29	.23	.22	.17	.25	.21	.21	.06	.21	.24	.26	.22
8	.33	.27	.21	.19	.06	.24	.20	.19	.19	.20	.25	.25	.23
9	.34	.31	.22	.21	.21	.24	.21	.03	.20	.19	.25	.22	.22
10	.36	.32	.22	.23	.21	.23	.20	.18	.19	.02	.23	.21	.20
11	.43	.41	.28	.26	.28	.25	.26	.26	.23	.24	.04	.19	.19
12	.41	.39	.26	.26	.26	.25	.25	.21	.22	.20	.19	.03	.17
13	.39	.36	.25	.25	.23	.26	.24	.21	.21	.20	.19	.17	.03
14	.39	.37	.24	.23	.25	.22	.22	.22	.18	.20	.17	.18	.17

TABLE 49

COMPARISON OF FACTOR STRUCTURES FOR
PRE AND POST INTERVENTION
USING COEFFICIENTS OF CONGRUENCE

POST	FACTORS FOR PRE INTERVENTION												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.99	.62	.52	.34	.48	.15	.35	.42	.47	.30	-.17	-.12	.05
2	.61	.99	.57	.42	.64	.18	.45	.45	.51	.41	-.26	-.20	.03
3	.35	.43	.45	.99	.59	.36	.51	.52	.45	.29	.05	-.13	.00
4	.51	.56	.99	.43	.49	.23	.35	.40	.36	.31	-.12	-.10	.01
5	.17	.21	.26	.38	.28	.99	.31	.26	.24	.20	-.01	-.03	-.26
6	.35	.46	.36	.49	.47	.30	.99	.38	.37	.33	-.15	-.24	-.03
7	.47	.63	.49	.53	.99	.23	.45	.44	.49	.32	-.18	-.21	.02
8	.42	.45	.41	.49	.46	.24	.38	.99	.40	.41	-.19	.06	.06
9	.46	.51	.37	.43	.49	.21	.36	.39	.99	.28	-.07	-.12	.03
10	.31	.43	.33	.29	.33	.19	.34	.43	.30	.99	-.24	-.03	.03
11	-.18	-.28	-.13	.05	-.19	.00	-.16	-.20	-.07	-.26	.99	.11	.06
12	-.12	-.20	-.10	-.12	-.23	-.02	-.24	.08	-.13	-.01	.10	.99	.16
13	.06	.04	.01	.01	.04	-.26	-.02	.08	.05	.01	.05	.19	.98
14	.06	.10	.11	.19	.20	.15	.13	.04	.05	.01	.03	-.09	-.08

TABLE 50

COMPARISON OF FACTOR STRUCTURES FOR
PRE AND POST INTERVENTION
USING S-INDICES

FACTORS FOR PRE INTERVENTION

POST	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.96	.96	.74	.52	.68	.19	.52	.54	.61	.38	-.07	-.08	.00
2	.92	.98	.76	.55	.71	.20	.51	.54	.59	.36	-.11	-.08	.00
3	.54	.57	.56	.93	.58	.48	.51	.48	.48	.23	.07	-.10	-.08
4	.86	.83	.91	.56	.61	.20	.52	.58	.52	.40	-.05	-.05	.00
5	.25	.30	.31	.57	.34	.84	.47	.40	.33	.28	.05	-.19	-.27
6	.57	.63	.51	.50	.57	.33	.86	.36	.57	.30	-.11	-.23	-.04
7	.64	.65	.53	.52	.91	.27	.49	.47	.62	.30	-.11	-.17	.00
8	.53	.51	.60	.47	.37	.19	.37	.94	.40	.49	-.13	.08	.05
9	.64	.62	.40	.47	.71	.21	.52	.38	.96	.25	.04	-.21	.00
10	.40	.39	.39	.24	.21	.16	.33	.51	.33	.84	-.25	.05	.00
11	-.10	-.13	-.03	.04	-.07	.14	-.09	-.13	.00	-.28	.96	.00	.00
12	-.09	-.18	-.08	-.10	-.27	-.32	-.29	.11	-.25	.00	.06	.95	.16
13	.00	-.02	.00	-.05	.00	-.35	-.05	.05	.00	.00	.00	.17	1.00
14	.11	.10	.21	.16	.06	.20	.14	-.07	.00	-.05	.00	-.10	.00

TABLE 51

COMPARISON OF FACTOR STRUCTURES FOR
PRE AND POST INTERVENTION
USING ROOT MEAN SQUARE

FACTORS FOR PRE INTERVENTION													
POST	1	2	3	4	5	6	7	8	9	10	11	12	13
1	.02	.32	.33	.38	.34	.41	.37	.35	.35	.37	.44	.43	.41
2	.32	.02	.30	.33	.28	.38	.32	.32	.31	.33	.42	.41	.38
3	.37	.32	.23	.02	.20	.24	.21	.20	.21	.23	.26	.28	.26
4	.33	.29	.01	.23	.21	.26	.24	.22	.22	.22	.28	.27	.25
5	.40	.36	.26	.23	.25	.02	.23	.23	.23	.23	.25	.25	.27
6	.36	.31	.24	.21	.21	.24	.01	.21	.21	.21	.26	.27	.24
7	.33	.27	.21	.20	.02	.24	.20	.20	.18	.20	.26	.26	.23
8	.34	.31	.22	.20	.20	.24	.21	.01	.19	.18	.25	.22	.21
9	.34	.30	.22	.21	.19	.24	.21	.20	.01	.19	.23	.23	.21
10	.36	.31	.22	.22	.21	.23	.20	.18	.19	.01	.23	.21	.20
11	.43	.41	.28	.25	.27	.25	.26	.25	.23	.23	.01	.19	.19
12	.42	.40	.27	.27	.27	.25	.27	.22	.24	.21	.19	.02	.17
13	.39	.37	.25	.25	.24	.27	.24	.21	.21	.20	.19	.17	.02
14	.39	.35	.23	.22	.21	.21	.21	.21	.20	.19	.18	.19	.18

FILM
10-8